

Swarthmore College



CATALOGUE

1899-1900

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Author:
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Title:
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Catalogue

1. Main College Building.
2. Science Hall—Laboratories and Shops.
3. Meeting House.
4. Observatory and Professor's Residence.
5. West House—Professor's Residence.
6. President's House.
7. Gymnasium for Young Men.
8. Boiler Rooms and Laundry.
9. Whittier Field.
10. Gas House.
11. Farm House.
12. College Barn.
13. Swarthmore Station, P., W. & R.
C. R. R.
14. Water-works.
15. Filter.
16. Gardner's Cottage.
17. Somerville Hall—Gymnasium for
Young Women.



SWARTHMORE COLLEGE, BUILDINGS AND GROUNDS



Thirty-first

Annual Catalogue

OF

Swarthmore College

Swarthmore, Pa.

1899-1900

PHILADELPHIA
FRANKLIN PRINTING COMPANY
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1900

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Calendar

1899-1900

1899. Ninth Month, 20th,	Fourth-day,	College year began.
1900. Second Month, 3d,	Seventh-day,	First Semester ends.
“ Second Month, 5th,	Second-day,	Second Semester begins.
“ Third Month, 13th,	Third-day,	Meeting of the Board of Managars.
“ Third Month, 24th,	Seventh-day,	Spring Recess begins.
“ Fourth Month, 3d,	Third-day,	Work resumed at 8.30 A. M.
“ Fifth Month, 21st,	Second-day,	Senior Examinations begin.
“ Fifth Month, 28th,	Second-day,	Senior Examinations completed.
“ Sixth Month, 4th,	Second-day,	Final Examinations begin.
“ Sixth Month, 8th,	Sixth-day,	} Examinations for Admission.
“ Sixth Month, 9th,	Seventh-day,	
“ Sixth Month, 11th,	Second-day,	Meeting of the Board of Managers.
“ Sixth Month, 11th,	Second-day,	Class-Day Exercises.
“ Sixth Month, 12th,	Third-day,	COMMENCEMENT.
“ Ninth Month, 18th,	Third-day,	Meeting of the Board of Managers.
“ Ninth Month, 19th,	Fourth-day,	Examinations for Admission.
“ Ninth Month, 20th,	Fifth-day,	Regular Exercises begin at 8.30 A. M.
“ Twelfth Month, 3d,	Second-day,	Meeting of the Board of Managers.
“ Twelfth Month, 4th,	Third-day,	<i>Annual Meeting of the Stockholders.</i>
“ Twelfth Month, 4th,	Third-day,	Meeting of the Board of Managers.
“ Twelfth Month, 22d,	Seventh-day,	Winter Recess begins.
1901. First Month, 3d,	Fifth-day,	Work resumed at 8.30 A. M.

Corporation

OFFICERS

Clerks

ROBERT M. JANNEY,
112 Drexel Building, Philadelphia.

ABBY W. MILLER,
1203 Delaware Avenue, Wilmington.

Treasurer

ROBERT BIDDLE,
507 Commerce Street, Philadelphia.

Board of Managers

Term expires Twelfth Month, 1900

EDWARD H. OGDEN,
314 Vine Street, Philadelphia.

EDWARD STABLER, JR.,
6 South Street, Baltimore, Md.

ELI M. LAMB,
1432 McCulloh St., Baltimore, Md.

HANNAH H. WOODNUTT,
1816 Arch Street, Philadelphia.

EMMA C. BANCROFT,
Wilmington, Del.

HOWARD W. LIPPINCOTT,
509 Real Estate Trust Building,
Philadelphia.

SUSAN W. LIPPINCOTT,
Cinnaminson, N. J.

MARY W. ALBERTSON,
Westbury Station, N. Y.

SWARTHMORE COLLEGE

5

Term expires Twelfth Month, 1901

JOHN T. WILLETS, 303 Pearl Street, New York.	JANE P. DOWNING, 1613 Race Street, Philadelphia.
CHARLES M. BIDDLE, 507 Commerce Street, Philadelphia.	ELIZABETH B. PASSMORE, Oxford, Pa.
DANIEL UNDERHILL, Jericho, L. I.	JOANNA W. LIPPINCOTT, Logan Station, Philadelphia.
EMMOR ROBERTS, Fellowship, N. J.	MARIANNA S. RAWSON, 226 E. 16th Street, New York.

Term expires Twelfth Month, 1902

ISAAC H. CLOTHIER, Eighth & Market Streets, Philadelphia.	FANNIE W. LOWTHORP, Trenton, N. J.
JAMES V. WATSON, 718 Franklin Street, Philadelphia.	EDMUND WEBSTER, 1156 S. Broad St., Philadelphia.
HERMAN HOOPES, 506 Real Estate Trust Building, Phila.	EMMA MCILVAIN COOPER, 715 Cooper Street, Camden, N. J.
ANNIE SHOEMAKER, Swarthmore, Pa.	REBECCA C. LONGSTRETH, Sharon Hill, Delaware Co., Pa.

Term expires Twelfth Month, 1903

JOSEPH WHARTON, P. O. Box 1332, Philadelphia.	WILLIAM M. JACKSON, 50 Beekman Street, New York.
MARY WILLETS, Sea Girt, N. J.	RACHEL W. HILLBORN, Swarthmore, Pa.
LYDIA H. HALL, Swarthmore, Pa.	EDWARD MARTIN, M. D., 415 S. 15th Street, Philadelphia.
MARY C. CLOTHIER, Wynnewood, Pa.	ALBERT A. MERRITT, 37 Columbus Ave., New York.

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President

JOSEPH WHARTON.

Secretary

HERMAN HOOPEES.

Auditors

HERMAN HOOPEES,

JOHN T. WILLETS.

Executive

EMMOR ROBERTS,
ISAAC H. CLOTHIER,
EDWARD H. OGDEN,
EDMUND WEBSTER,
HOWARD W. LIPPINCOTT,
JOHN T. WILLETS,
CHARLES M. BIDDLE,
EDWARD MARTIN,

JANE P. DOWNING,
SUSAN W. LIPPINCOTT,
EMMA MCILVAIN COOPER,
HANNAH H. WOODNUTT,
MARY C. CLOTHIER,
ELIZABETH B. PASSMORE,
ABBY W. MILLER,
EMMA C. BANCROFT.

Ex-Officio, HERMAN HOOPEES.

Finance

CHARLES M. BIDDLE,

JAMES V. WATSON,
ROBERT M. JANNEY.

Instruction

ANNIE SHOEMAKER,	RACHEL W. HILLBORN,
EMMOR ROBERTS,	EDWARD MARTIN,
MARY WILLETS,	HOWARD W. LIPPINCOTT,
SUSAN W. LIPPINCOTT,	EDWARD STABLER, JR.
LYDIA H. HALL,	ABBY W. MILLER,
WILLIAM M. JACKSON,	MARIANNA S. RAWSON.

Building and Property

EDWARD H. OGDEN,	RACHEL W. HILLBORN,
EMMOR ROBERTS,	HOWARD W. LIPPINCOTT,
JANE P. DOWNING,	ROBERT M. JANNEY,
EDMUND WEBSTER,	JOHN T. WILLETS.

Museum and Laboratories

MARY WILLETS,	EDWARD MARTIN,
ELI M. LAMB,	MARY W. ALBERTSON,
	DANIEL UNDERHILL.

Friends' Historical Library

LYDIA H. HALL,	ISAAC H. CLOTHIER,
EDWARD STABLER, JR.,	REBECCA C. LONGSTRETH,
	ALBERT A. MERRITT.

Trusts, Endowments, and Scholarships

EDMUND WEBSTER,	SUSAN W. LIPPINCOTT,
EDWARD H. OGDEN,	JOHN T. WILLETS,
EMMOR ROBERTS,	REBECCA C. LONGSTRETH, <i>Sec'y.</i>

Trustees of Endowed Professorships

ISAAC H. CLOTHIER,	EDWARD H. OGDEN,
	EMMOR ROBERTS.

Library

LYDIA H. HALL,	EDWARD STABLER, JR.,
RACHEL W. HILLBORN,	JOANNA W. LIPPINCOTT,
	ALBERT A. MERRITT.

Faculty*

1899-1900.

WILLIAM W. BIRDSALL,
President,

ELIZABETH POWELL BOND,
Dean,

PROF. EDWARD H. MAGILL,

PROF. WILLIAM HYDE APPLETON,

PROF. SUSAN J. CUNNINGHAM,

† SUPT. WILLIAM J. HALL,

PROF. WILLIAM C. DAY,

PROF. FERRIS W. PRICE,

PROF. GEORGE A. HOADLEY,

PROF. SPENCER TROTTER,

REGISTRAR ESTHER T. MOORE,

PROF. MARIE A. K. HOADLEY,

PROF. WILLIAM I. HULL,

PROF. WILBUR M. STINE,

ASS'T. PROF. JOHN RUSSELL HAYES.

* BY-LAWS—"The President, Dean, and such of the resident Professors and others as may be elected by the Board, shall constitute the Faculty. They shall hold regular meetings, arrange the course of study, determine the qualifications for admission and for graduation, decide upon rules of order, and determine all questions pertaining to the discipline or instruction, subject to the approval of the Executive Committee, to whom they shall report monthly."

† On leave of absence for the year.

Officers of Instruction and Administration*

WILLIAM W. BIRDSALL, A.M.,
President.

ELIZABETH POWELL BOND, A.M.,
Dean.

EDWARD H. MAGILL, A.M., LL.D.,
Professor of the French Language and Literature.

ARTHUR BEARDSLEY, C.E., Ph.D.
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WILLIAM HYDE APPLETON, A.M., LL.B., Ph.D.,
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SUSAN J. CUNNINGHAM, Sc.D.,
Edward H. Magill Professor of Mathematics and Astronomy.

WILLIAM CATHCART DAY, Ph.D.,
Professor of Chemistry.

SPENCER TROTTER, M.D.,
Professor of Biology and Geology.

GEORGE A HOADLEY, C.E., A.M.,
Professor of Physics.

FERRIS W. PRICE, A.M.,
Isaac H. Clothier Professor of the Latin Language and Literature.

MARIE A. K. HOADLEY, A.M.,
Professor of the German Language and Literature.

WILLIAM I. HULL, Ph.D.,
Joseph Wharton Professor of History and Political Economy.

WILBUR M. STINE, Ph.D.,
I. V. Williamson Professor of Engineering, and Director of the Workshops.

† JESSE H. HOLMES, Ph.D.
Professor of History and Biblical Literature.

MYRTIE E. FURMAN, M.O.,
Assistant Professor in charge of Elocution.

JOHN RUSSELL HAYES, A.B., LL.B.,
Assistant Professor of English.

* Arranged with the exception of the President and Dean, in the order of appointment, as Professors, Assistant Professors, etc.

† Appointment to take effect Ninth Month, 1900

BEATRICE MAGILL,

Lecturer on the History of Painting, and Director of the Studio.

EMILY G. HUNT, M.D.,

Lecturer on Physiology and Hygiene to the Young Women.

ALICE M. ATKINSON, Ph.D.,

Assistant in Greek.

CHARLES F. WOODS, Ph.D.,

Assistant in French and German.

FRANK E. CRAIG, B.S.,

Assistant in Engineering.

EDWIN HAVILAND, JR., A.M.,

Assistant in Mathematics, and in Engineering.

GEORGE EDWARD THOMAS, Ph.D.,

Assistant in Chemistry.

MARY V. MITCHELL GREEN, M.D.,

Director of Physical Training for Young Women.

W. SINNOTT CUMMINGS, M.D.,

Director of Physical Training for Young Men.

SARAH BROOKE FARQUHAR,

Instructor in Department of Physical Training.

ESTHER T. MOORE, A.B.,

Registrar, and Secretary to the President.

SARAH M. NOWELL,

Librarian.

CHARLES A. BUNTING, B.S.,

Acting Superintendent.

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Matron of West Wing.

ELLEN ROBERTS,

Director of Laundry.

MARY R. SATTERTHWAITE,

Housekeeper.

ELLA MICHENER,

Matron of East Wing.

CAROLINE A. LUKENS,

Matron of Central Building.

Students

SENIOR CLASS		
Name	Course	Residence
BIRD T. BALDWIN, ¹	<i>Science</i>	Marshallton, Pa.
LUCY BANCROFT,	<i>Arts</i>	Wilmington, Del.
GEORGE L. BEAN,	<i>Engineering</i>	Philadelphia, Pa.
A. MARY BROWN,	<i>Letters</i>	Cornwall, N. Y.
ROBERT L. BROWNFIELD, JR.,	<i>Engineering</i>	Philadelphia, Pa.
FLORENCE E. CHRISTY,	<i>Letters</i>	Bloomfield, Ontario, Can.
CAROLINE F. COMLY,	<i>Letters</i>	Philadelphia, Pa.
PAUL DARLINGTON,	<i>Science</i>	Darling, Pa.
MARGARET EVES,	<i>Letters</i>	Millville, Pa.
ROGER B. FARQUHAR, JR.,	<i>Science</i>	Rockville, Md.
ANNA GILLINGHAM,	<i>Arts</i>	Atlantic City, N. J.
JOSEPH C. HAINES,	<i>Letters</i>	Mickleton, N. J.
EDMUND A. HARVEY,	<i>Arts</i>	Brandywine Summit, Pa.
MARY S. HAVILAND,	<i>Letters</i>	Brooklyn, N. Y.
CAROLINE L. HAWKE,	<i>Arts</i>	Piedmont, Ala.
ANNA K. HIMES,	<i>Letters</i>	New Oxford, Pa.
OTLEY E. JACKSON,	<i>Engineering</i>	Nine Points, Pa.
GEORGE M. LAMB, JR.,	<i>Science</i>	Baltimore, Md.
ANNA H. LIPPINCOTT,	<i>Letters</i>	Riverton, N. J.
ALICE M. LUKENS,	<i>Science</i>	Swarthmore, Pa.
JESSIE M. LUKENS,	<i>Letters</i>	Philadelphia, Pa.
EDNA M. MILLER,	<i>Letters</i>	Lancaster, Pa.
E. MAE MYERS,	<i>Letters</i>	Kennett Square, Pa.
GEORGIA C. MYERS,	<i>Letters</i>	Kennett Square, Pa.
KATHARINE PFEIFFER,	<i>Letters</i>	Camden, N. J.
MARGERY PYLE,	<i>Arts</i>	London Grove, Pa.
HELEN T. SULLIVAN,	<i>Letters</i>	Moorestown, N. J.
WILLIAM H. THATCHER,	<i>Science</i>	Wilmington, Del.
J. ETHEL THOMPSON, ¹	<i>Letters</i>	Baltimore, Md.

¹ Is taking all the work of the Senior Class, but has not yet (First Month 1900) fulfilled the requirements for formal admission to it.

JUNIOR CLASS

Name	Course	Residence
EMILY M. ATKINSON,	<i>Arts</i> , . . .	McVeytown, Pa.
SUSAN E. ATKINSON,	<i>Letters</i> , . .	Earlington, Ky.
HARRY N. BENKERT,	<i>Engineering</i> ,	Morton, Pa.
FANNY B. CHEYNEY,	<i>Arts</i> , . . .	Media, Pa.
J. EDWARD DOWNING,	<i>Letters</i> , . .	East Norwich, N. Y.
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DEBORAH H. FERRIER,	<i>Science</i> , . .	Moorestown, N. J.
MAY K. FLANNERY,	<i>Letters</i> , . .	New York, N. Y.
PERCIVAL M. FOGG,	<i>Engineering</i> ,	Philadelphia, Pa.
GERTRUDE F. GILBERT,	<i>Letters</i> , . .	Flushing, N. Y.
T. WALTER GILKYSO,	<i>Arts</i> , . . .	Phoenixville, Pa.
ELIZABETH L. GILLINGHAM, . .	<i>Letters</i> , . .	Moorestown, N. J.
ETHEL GRIEST,	<i>Letters</i> , . .	Reading, Pa.
MARY F. HAWKE,	<i>Arts</i> , . . .	Piedmont, Ala.
W. LYNDON HESS,	<i>Letters</i> , . .	Camden, N. J.
ANNA B. HOWARD,	<i>Letters</i> , . .	Media, Pa.
EDITH H. JANNEY,	<i>Letters</i> , . .	Occoquan, Va.
ARTHUR H. JENKINS,	<i>Letters</i> , . .	Gwynedd, Pa.
AMY W. KNICKERBOCKER, . . .	<i>Letters</i> , . .	New Lenox, Ill.
MABEL W. LATIMER,	<i>Letters</i> , . .	Wilmington, Del.
MARY W. LIPPINCOTT,	<i>Letters</i> , . .	Riverton, N. J.
J. WARNER E. LOVE,	<i>Engineering</i> ,	Moorestown, N. J.
FRANK M. McVAUGH, JR., . . .	<i>Science</i> , . .	Hockessin, Del.
MARTHA W. MOORE,	<i>Letters</i> , . .	Phoenixville, Pa.
EVELYN S. NIVIN,	<i>Letters</i> , . .	Landenberg, Pa.
J. WILMER PANCOAST,	<i>Science</i> , . .	Mickleton, N. J.
G. ARTHUR SEAMAN,	<i>Arts</i> , . . .	Williamsport, Pa.
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MARK THISTLETHWAITE,	<i>Letters</i> , . .	Richmond, Ind.
WILLIAM C. TYSON,	<i>Science</i> , . .	Baltimore, Md.
ADA UNDERHILL,	<i>Science</i> , . .	Glen Head, N. Y.
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EDITH M. WILSON,	<i>Letters</i> , . .	Bloomfield, Ontario, Can.
GERTRUDE L. WRIGHT,	<i>Science</i> , . .	Riverton, N. J.
M. FLORENCE WYNN,	<i>Arts</i> , . . .	West Chester, Pa.
M. ALMA YOUNG,	<i>Arts</i> , . . .	Easton, Pa.

SOPHOMORE CLASS

Name	Course	Residence
ELIZABETH A. ASHBURNER, . . .	<i>Arts</i> , . . .	Media, Pa.
ELIZABETH N. BAKER, . . .	<i>Letters</i> , . . .	Coatesville, Pa.
S. ROSCOE BATEMAN, . . .	<i>Science</i> , . . .	Glenloch, N. J.
ETHEL BEARDSLEY, . . .	<i>Arts</i> , . . .	Swarthmore, Pa.
JOSEPH BILDERBACK, . . .	<i>Science</i> , . . .	Salem, N. J.
RAYMOND C. BISLER, . . .	<i>Engineering</i> , . . .	Philadelphia, Pa.
HERBERT BUCHANAN, . . .	<i>Engineering</i> , . . .	Philadelphia, Pa.
EDITH COALE, . . .	<i>Letters</i> , . . .	Riverton, N. J.
EDITH H. COOLEY, . . .	<i>Arts</i> , . . .	Plainfield, N. J.
CHARLES C. CORSON, . . .	<i>Science</i> , . . .	Plymouth Meeting, Pa.
CHESTER CUTLER, . . .	<i>Letters</i> , . . .	Chester, Pa.
LINA B. DILLISTIN, . . .	<i>Letters</i> , . . .	Paterson, N. J.
ELIZABETH DINSMORE, . . .	<i>Letters</i> , . . .	Philadelphia, Pa.
CHARLES R. DURNALL, . . .	<i>Engineering</i> , . . .	Swarthmore, Pa.
EDITH G. ELMORE, . . .	<i>Letters</i> , . . .	Brooklyn, N. Y.
REBECCA M. ELY, . . .	<i>Letters</i> , . . .	Philadelphia, Pa.
ERNEST L. GREEN, . . .	<i>Arts</i> , . . .	Media, Pa.
GERTRUDE P. GRISCOM, . . .	<i>Letters</i> , . . .	Pottsville, Pa.
J. MILTON GRISCOM, . . .	<i>Science</i> , . . .	Salem, N. J.
FANNIE M. HARLEY, . . .	<i>Letters</i> , . . .	Norristown, Pa.
EDSON S. HARRIS, . . .	<i>Engineering</i> , . . .	Philadelphia, Pa.
ARTHUR G. HOADLEY, . . .	<i>Science</i> , . . .	Swarthmore, Pa.
ALMA A. HULL, . . .	<i>Arts</i> , . . .	Baltimore, Md.
STELLA L. KOENIG, . . .	<i>Letters</i> , . . .	Lewistown, Pa.
MARGARETTA W. LAMB, . . .	<i>Letters</i> , . . .	Baltimore, Md.
D. HUNTER LEWIS, . . .	<i>Science</i> , . . .	Newtown Square, Pa.
T. ELLWOOD LIGHTFOOT, . . .	<i>Engineering</i> , . . .	Reading, Pa.
ALICE R. LINVILL, . . .	<i>Letters</i> , . . .	Swarthmore, Pa.
NATHAN H. MANNAKEE, . . .	<i>Science</i> , . . .	Washington, D. C.
CYRUS D. MARTER, . . .	<i>Letters</i> , . . .	Camden, N. J.
ALLEN R. MITCHELL, JR., . . .	<i>Letters</i> , . . .	Langhorne, Pa.
RAYMOND MOWERS, . . .	<i>Science</i> , . . .	Camden, N. J.
SOPHIE L. S. NIVIN, . . .	<i>Letters</i> , . . .	Landenberg, Pa.
MARGARET M. PATTERSON, . . .	<i>Letters</i> , . . .	Philadelphia, Pa.
ANNA R. PAXSON, . . .	<i>Letters</i> , . . .	Langhorne, Pa.
ROBERT L. PEARSON, . . .	<i>Engineering</i> , . . .	Fern Rock, Pa.
RICHARD PETERS, 3d, . . .	<i>Engineering</i> , . . .	Philadelphia, Pa.

Name	Course	Residence
WILLIAM M. POWELL, . . .	<i>Engineering</i> ,	Swarthmore, Pa.
ELLWOOD RAMSEY, JR., . . .	<i>Engineering</i> ,	Germantown, Pa.
MARY B. RICHARDS, . . .	<i>Letters</i> , . .	Toughkenamon, Pa.
ELLIOTT RICHARDSON, . . .	<i>Engineering</i> ,	Torresdale, Pa.
L. WINIFRED ROGERS, . . .	<i>Arts</i> , . . .	Corry, Pa.
HELEN W. SPEAKMAN, . . .	<i>Arts</i> , . . .	Wilmington, Del.
NORA L. STABLER, . . .	<i>Letters</i> , . .	Sandy Spring, Md.
ALICE P. TABOR, . . .	<i>Letters</i> , . .	Rochester, N. Y.
ERNEST J. TAYLOR, . . .	<i>Engineering</i> ,	Nuttallburg, W. Va.
MARGARET H. TAYLOR, . . .	<i>Letters</i> , . .	Woodstown, N. J.
JACOB P. TEMPLE, . . .	<i>Engineering</i> ,	Ward, Pa.
CLARA M. THOMAS, . . .	<i>Arts</i> , . . .	West Chester, Pa.
EDITH L. VERLENDEN, . . .	<i>Letters</i> , . .	Darby, Pa.
ROBERT H. WALKER, . . .	<i>Science</i> , . .	Baltimore, Md.
ANNA W. WATERS, . . .	<i>Arts</i> , . . .	Stroudsburg, Pa.
MAUDE L. WATTERS, . . .	<i>Arts</i> , . . .	Media, Pa.
ALBERT M. WILLIAMS, . . .	<i>Engineering</i> ,	Holicong, Pa.
EDITH M. WINDER, . . .	<i>Letters</i> , . .	Richmond, Ind.
EDWARD H. WORTH, . . .	<i>Engineering</i> ,	Coatesville, Pa.
IDA WRIGHT, . . .	<i>Letters</i> , . .	Brooklyn, N. Y.

FRESHMAN CLASS

Name	Course	Residence
BYRON BEANS, . . .	<i>Letters</i> , . .	Warminster, Pa.
L. CARL BLADES, . . .	<i>Engineering</i> ,	Elizabeth City, N. C.
WALKER M. BOND, . . .	<i>Engineering</i> ,	Winchester, Va.
ELIZABETH M. BOOTH, . . .	<i>Arts</i> , . . .	Chester, Pa.
EDWARD T. BROOKE, . . .	<i>Science</i> , . .	Sandy Spring, Md.
CALEB E. CHAMBERS, . . .	<i>Engineering</i> ,	Chatham, Pa.
CAROLINE CLOTHIER, . . .	<i>Letters</i> , . .	Wynnewood, Pa.
WILLIAM J. CLOTHIER, . . .	<i>Arts</i> , . . .	Wynnewood, Pa.
EDMUND COCKS, . . .	<i>Science</i> , . .	Cornwall, N. Y.
EDWARD N. G. DAVIS, . . .	<i>Science</i> , . .	Newtown Square, Pa.
JAMES K. DAVIS, . . .	<i>Letters</i> , . .	Selin's Grove, Pa.
HELEN M. EASTWICK, . . .	<i>Letters</i> , . .	Philadelphia, Pa.
NORMA ECKSTEIN, . . .	<i>Letters</i> , . .	Savannah, Ga.
J. HORACE ERVIEN, . . .	<i>Engineering</i> ,	Ogontz, Pa.
HOWARD S. EVANS, . . .	<i>Engineering</i> ,	Morton, Pa.

Name	Course	Residence
MARION FARQUHAR,	<i>Letters</i> , . .	Sandy Spring, Md.
EMMA T. FELL,	<i>Science</i> , . .	Philadelphia, Pa.
LEWIS FUSSELL,	<i>Science</i> , . .	Media, Pa.
JOHN M. GATES,	<i>Letters</i> , . .	Tyrone, Pa.
MARGARET GLEIM,	<i>Science</i> , . .	Lansdowne, Pa.
ALBERT P. HALL, JR.,	<i>Engineering</i> , . .	West Chester, Pa.
EMMA F. HAMILTON,	<i>Letters</i> , . .	Gladwyne, Pa.
WILLIAM E. HANNUM,	<i>Engineering</i> , . .	Ward, Pa.
CLEORA M. HAVILAND,	<i>Letters</i> , . .	Brooklyn, N. Y.
ANNIE S. HAWKE,	<i>Letters</i> , . .	Piedmont, Ala.
AMELIA E. HIMES,	<i>Letters</i> , . .	New Oxford, Pa.
MABEL E. HOLLINSHEAD,	<i>Letters</i> , . .	Moorestown, N. J.
JOHN HOWARD HOPKINS,	<i>Engineering</i> , . .	Baltimore, Md.
ANNA M. JACKSON,	<i>Letters</i> , . .	New York N. Y.
ELIZABETH W. JACKSON,	<i>Letters</i> , . .	Bartville, Pa.
HERBERT E. JENKS,	<i>Engineering</i> , . .	Byberry, Pa.
FRED. A. JOHNSON,	<i>Letters</i> , . .	Emporium, Pa.
CARRIE B. KILGORE,	<i>Arts</i> , . .	Philadelphia, Pa.
FANNIE B. KILGORE,	<i>Arts</i> , . .	Philadelphia, Pa.
ELSIE H. KOENIG,	<i>Letters</i> , . .	Lewistown, Pa.
ROBERT E. LAMB,	<i>Engineering</i> , . .	Baltimore, Md.
HELEN E. LEASE,	<i>Letters</i> , . .	Salem, Ohio.
MARION LUKENS,	<i>Letters</i> , . .	Philadelphia, Pa.
T. STOCKTON MATTHEWS,	<i>Science</i> , . .	Baltimore, Md.
ROY McVAUGH,	<i>Letters</i> , . .	Hockessin, Del.
EDWARD R. MEREDITH,	<i>Engineering</i> , . .	Calcium, Pa.
WILLIAM M. MUSCHERT,	<i>Science</i> , . .	Trenton, N. J.
CHARLOTTE F. OVEREND,	<i>Letters</i> , . .	Pittsburgh, Pa.
NORMAN S. PASSMORE,	<i>Arts</i> , . .	Oxford, Pa.
HOWARD D. PFEIFFER,	<i>Engineering</i> , . .	Camden, N. J.
FRANCES PRESTON,	<i>Letters</i> , . .	Tayloria, Pa.
MARRIOTT PRICE,	<i>Engineering</i> , . .	Baltimore, Md.
HELEN I. ROGERS,	<i>Letters</i> , . .	Moorestown, N. J.
ANNA L. SMEDLEY,	<i>Letters</i> , . .	Willistown Inn, Pa.
HELEN D. SOUDER,	<i>Arts</i> , . .	Woodstown, N. J.
SAMUEL T. STEWART,	<i>Arts</i> , . .	Cleveland, Ohio.
ELIZABETH SUTTON,	<i>Letters</i> , . .	New York, N. Y.

Name	Course	Residence
ELMOR J. TEMPLE,	<i>Engineering</i> ,	Lionville, Pa.
DEBORAH G. THOMAS,	<i>Letters</i> , . .	Philadelphia, Pa.
JOHN T. THOMAS,	<i>Engineering</i> ,	Scranton, Pa.
SARAH E. TRACY,	<i>Letters</i> , . .	Cornish, N. H.
WILLIAM W. TURNER,	<i>Letters</i> , . .	Betterton, Md.
NORMAN D. VERNON,	<i>Engineering</i> ,	Pomeroy, Pa.
LULU VON ROMDOHR,	<i>Letters</i> , . .	New York, N. Y.
WILLIAM J. L. WALKER,	<i>Letters</i> , . .	Gap, Pa.
EVA WALLEN,	<i>Letters</i> , . .	Swarthmore, Pa.
ASA P. WAY,	<i>Engineering</i> ,	St. Thomas, Ont., Can.
EDMUND R. WEEK, JR.,	<i>Engineering</i> ,	Alexandria, Ind.
GEORGE S. WORTH,	<i>Engineering</i> ,	Coatesville, Pa.

Students in Irregular and Partial Courses*

(With the class to which their work most nearly corresponds).

Name	Course	Residence
HOWARD N. CASSEL,	<i>Junior Engineering</i> ,	Marietta, Pa.
SARA A. COLSON,	<i>Junior Science</i> , . .	Woodstown, N. J.
JESSIE BARTLETT GINN, <i>Junior Letters</i> ,		Swarthmore, Pa.
MARY C. JOHNSON,	<i>Junior Letters</i> , . .	Philadelphia, Pa.
WILLIAM H. BEARD,	<i>Sophomore Science</i> ,	Rockville, Md.
FREDERICK G. BELL,	<i>Sophomore Engineering</i> ,	Salisbury, Md.
HILDA M. GANSMAN,	<i>Sophomore Letters</i> , . .	Lancaster, Pa.
EMMA G. HOLLOWAY,	<i>Sophomore Science</i> , . .	N. Manchester, Ind.
IRMA V. PYLE,	<i>Sophomore Letters</i> , . .	Jersey City, N. J.
ALIDA M. STEPHENS,	<i>Sophomore Arts</i> , . .	Winchester, Mass.
W. WALLACE BARR,	<i>Freshman Letters</i> , . .	Escanaba, Mich.
ARTHUR M. DEWEES,	<i>Freshman Letters</i> , . .	Hoyt, Pa.
HALLIE G. HULBURT,	<i>Freshman Letters</i> , . .	Swarthmore, Pa.
ANNA C. HUTCHINSON, <i>Freshman Letters</i> ,		New York, N. Y.
MARY W. KEANE,	<i>Freshman Letters</i> , . .	Chicago, Ill.
EDITH O. MCCAIN,	<i>Freshman Letters</i> , . .	Philadelphia, Pa.
ELIZABETH MORRIS,	<i>Freshman Letters</i> , . .	Milton, Ind.
WM. OVERFIELD, JR.,	<i>Freshman Engineering</i> ,	Meshoppen, Pa.

* See page 52.

Name	Course	Residence
SUSANNA L. SEARCH,	<i>Freshman Letters</i> ,	Lizette, Pa.
MURRAY A. STOVER,	<i>Freshman Engineering</i> ,	Norwich, Ont., Can.
LOUIS E. THOMPSON,	<i>Freshman Letters</i> ,	Penn's Park, Pa.

SUMMARY

Seniors,	29
Juniors,	37
Sophomores,	57
Freshmen,	64
Students in Irregular and Partial Courses,	21
Total,	208

Swarthmore College

Swarthmore College was founded in 1864, through the efforts of members of the Religious Society of Friends, for the purpose of securing to the young people of the Society the opportunity for higher education under the guarded care of those of their own religious faith. Others are admitted upon the same terms as Friends, and nothing of a sectarian nature appears in the instruction or in the management. The intention of the founders, however, to make the promotion of Christian character the first consideration, while, at the same time, providing opportunities for liberal culture and maintaining a high standard of scholarship has been steadily kept in view.

Swarthmore is ten miles southwest of Philadelphia on the Central Division of the Philadelphia, Wilmington, & Baltimore Railroad, and is accessible by frequent trains from Broad Street Station. The College occupies a commanding position, the buildings being located upon high land from which the campus slopes gently down to the level of the Atlantic Plain, extending to the Delaware River. From the upper stories of the central building the view includes many miles of the river, with the country lying between, and the cities of Philadelphia and Chester in the distance. Crum Creek, flowing through a deep gorge of great natural beauty, forms the western boundary of the College property, which comprises over two hundred acres.

The Principal College Building, 348 feet in length, is a massive stone structure, the central portion of which is separated from the two wings by fire-proof compartments. The central building is five stories in height, and with an extension at the rear provides for assembly room, lecture rooms, museum, library, reading room, parlors, dining hall, etc. The wings are four stories high. The ground floors are devoted to lecture and recitation rooms; the remaining floors in the east wing contain the dormitories of the young women, and in the west wing those of the young men. Several instructors reside in the building.

Science Hall is a two-story stone building with basement, 162 by 64 feet, devoted to the departments of Chemistry, Physics, and Engineering. It contains, besides lecture and recitation rooms, electrical, physical, engineering, and chemical laboratories; machine shop, and draughting rooms; foundry, forge, and wood-working rooms; engine and boiler rooms. All departments are well equipped, and new apparatus and machinery are constantly added as occasion demands.

The Astronomical Observatory is especially arranged for purposes of instruction, and contains an equipment adequate both for class work and for the prosecution of research. This includes a transit of three-inch aperture, an equatorial telescope of six-inch aperture, with micrometer and spectroscope attachments; a chronograph and chronometer, mean-time and sidereal clocks, and a reference library. Connected with the observatory is the local Signal Service Station of the State Weather Bureau, fully provided with the necessary meteorological apparatus. The latest addition to the building accommodates a Seismograph of the most approved construction, which records by photographic process any vibration of the crust of the earth.

Other buildings upon the campus are the Meeting-house, the President's House, the West House (birthplace of Benjamin West, erected in 1724), now the residence of the Professor of Greek, the house of the Professor of Astronomy, Somerville Hall (gymnasium for young women), the very adequate new gymnasium for young men, the necessary farm buildings, etc.

The Main Building, Science Hall, and the two gymnasiums are heated by steam from a central plant. A new heating system for the Main Building was recently installed. It consists of two 72-inch fans at the extreme ends of the building, which force the air over coils of steam pipe, and through conduits, accurately graduated in size, to the various rooms, insuring proper heat and adequate ventilation.

Libraries and Reading Room

The Libraries of the College collectively contain 19,226 bound volumes, as follows:

The General Library,	13,364
Literary Societies' Libraries.	3,500
Friends' Historical Library,	2,362

Besides the above, the great collections of books in the Philadelphia Library, the Mercantile Library, the Free Library of Philadelphia, as well as those in the many special and technical libraries of the city, are open to the use of students under proper regulations.

Friends' Historical Library, founded by the late Anson Lapham, of Skaneateles, N. Y., contains a valuable collection of Friends' books, photographs of representative Friends, and manuscripts relating to the Society and its history, and is, upon application to the Librarian, accessible to all persons interested in the doctrines and history of Friends. This collection is stored in a fire-proof apartment, and it is hoped that Friends and others will deem it a secure place in which to deposit books and other material in their possession which may be of interest in connection with the history of the Society. Such contributions are solicited, and should be addressed to "Friends' Historical Library," or to "ARTHUR BEARDSLEY, Librarian," Swarthmore, Pa.

The Reading Room is supplied with the leading literary, scientific, and technical journals, and with newspapers of the principal cities.

Student Societies

Three literary societies are maintained by the students: the *Delphic* and *Eunomian* by the young men, the *Somerville* by the young women. Regular meetings are held for literary exercises, which afford opportunity to acquire skill in parliamentary practice and in debate. They are regarded as valuable auxiliaries in the work of the College. Each society has, under the management of its own members, a reading room containing periodicals and daily papers, and a library accessible to all students. The total number of books in the three libraries is over three thousand.

The *Joseph Leidy Scientific Society* is a flourishing organization having for its object the endeavor to keep in touch with the results of modern scientific investigation in the four branches of Natural Science and in Engineering. At its meetings, held monthly, announcements of recent discoveries are made by the various instructors, and their import and their bearing upon science are briefly discussed.

Papers are also prepared and read by the students in the Science and Engineering departments.

The *Latin Society* meets monthly to discuss subjects of interest to students of classical antiquity. The work for 1899-1900 deals with the private life of the Romans.

The *Camera Club* is an organization of young men for studying the principles of photography and their application to illustrative and scientific work. Their reading-room is supplied with photographic books and journals. The club gives an annual lantern slide exhibition of the work done by its members.

The *Athletic Association* is an organization of the young men for the encouragement of physical culture and athletic sports.

The *Girls' Athletic Club* is a similar organization of the young women.

The Museum

The *Museum* of the College is strictly an educational collection, and the specimens from its cases are in constant use in the lecture room and laboratory. It is growing steadily, and always in the direction of rendering more perfect the means of illustrating the different departments of Natural Science.

It includes the following collections:

1. The *Joseph Leidy Collection of Minerals*, the result of thirty years' discriminative collecting by its founder, consists of exceedingly choice cabinet specimens of minerals, characteristic rocks and ores, and models of the various systems of crystallization.

2. The *Collection Illustrating Comparative Osteology* consists of a large series of partial and complete skeletons, prepared at Prof. Henry Ward's Natural History Establishment in Rochester, N. Y., and illustrates the structure and framework of backboneed animals.

3. The *Wilcox and Farnham Collection of Birds* comprises stuffed specimens of native and foreign birds. Nearly all the species visiting this State are represented.

4. The *Frederick Kohl Ethnological Collection* consists of Indian implements, weapons, clothing, etc., mostly from Alaska.

5. The *C. F. Parker Collection of Shells* is made up of choice typical land, fresh-water, and marine shells. These specimens were all selected by the late Dr. Joseph Leidy from the extensive collection of the founder, C. F. Parker, who was for many years the Curator in charge of the Academy of Natural Sciences of Philadelphia.

6. The *Robert R. Corson Collection of Stalactites and Stalagmites* is composed of specimens from Luray Caverns, and illustrates the peculiar limestone formations of that and similar districts.

7. The *Eckfeldt Herbarium* contains over two thousand specimens illustrating the flora of Pennsylvania. The *Annie Shoemaker Collection* is a valuable addition to this.

In addition to the above, there is a large and constantly increasing collection of specimens of vertebrates and invertebrates (including the U. S. Fish Commission Educational Collection), of dissected specimens for demonstration in the lectures on Physiology, glass and papier-maché models of invertebrates and of special points in vegetable and animal morphology, besides some three hundred classified diagrams and colored charts illustrating every branch of natural history.

Gymnasiums, etc.

The Gymnasium for young men, erected in 1899, is supplied with a new and very complete outfit of apparatus after the Sargent System, and affords facilities for the required class and individual work, as well as for various in-door games. That for young women was erected through the efforts of the Somerville Literary Society, and bears its name. It is furnished with apparatus adapted to the Swedish System. A statement of methods and requirements in the department of Physical Training will be found on page 49.

The extensive and beautiful grounds invite to out-door exercise, which is encouraged in every reasonable way. Whittier Field, the College athletic ground, provides a quarter-mile cinder track, a well-graded field for athletic sports, and a suitable stand for spectators. Upon the campus are tennis courts and golf links, much used by students of both sexes. Cross-country running, bicycle riding, and skating on Crum Creek are favorite forms of exercise.

Religious Culture

The daily sessions of the College are opened by a general assembling of students and instructors for the reading of Scripture or for other suitable exercise, preceded and followed by a period of silence. The students attend meeting on First-day mornings, with the instructors, members of the household, and Friends of the neighborhood. By these means, and particularly by individual influence, and by the constant effort to maintain in the institution a spirit in harmony with the purpose of its founders, it is believed that a proper care is exercised to mould the characters of young people in conformity to Christian standards.

Social Life

Swarthmore, as a co-educational institution, undertakes to provide college life in a home setting ; to supply an atmosphere in which manly and womanly character may develop naturally and completely. It provides that freedom which places upon each individual the responsibility of self-control, demanding the right exercise of his judgment, while making provision for the correction of errors, supplementing his judgment and will, when necessary, by the wise direction of those in whom his confidence may be justly placed. The students meet in the dining-hall as in their homes, and for a social hour in the reception parlor before evening work begins. There are other social occasions in the class receptions that occur during the year, and the more public College receptions to which friends of the institution are invited. This intercourse of the students is under the care of the Dean and her assistants, and it is the aim of the College to make it a means of social culture.

Expenses

The cost of Board and Tuition is \$400 per year, of which \$250 is payable in advance, and \$150 on the first of First month.

The tuition of Day students is \$150 per year, of which \$125 is payable in advance, and the remainder on the first of First month. When they take luncheon with the resident students there is an additional charge of \$50 per year.

A deposit of five dollars is required of each young man to defray any expense incurred by injury to property. The unexpended balance will be returned at the end of the year.

Students purchase their own books, which the College will furnish at the lowest obtainable rates. They also buy their own stationery, drawing implements, and certain tools and materials used in the workshops, and pay at a reasonable rate for laundry work done at the College.

In case of illness, no extra charge is made unless a physician or trained nurse is employed.

The above may be depended upon as covering all necessary expenses.

Payments

Payments are to be made by check or draft to the order of

ROBERT BIDDLE, Treasurer,

NO. 507 COMMERCE STREET, PHILADELPHIA, PA.

Fellowships and Scholarships

FELLOWSHIPS

THE JOSHUA LIPPINCOTT FELLOWSHIP, founded by Howard W. Lippincott, A. B., of the Class of 1875, in memory of his father, consists of a fund yielding an income of \$450 per year, which is granted annually by the Faculty, with the concurrence of the Instruc-

tion Committee, to a graduate of the College to enable him to pursue advanced study under the direction or with the approval of the Faculty.

THE LUCRETIA MOTT FELLOWSHIP, founded by the Somerville Literary Society and sustained by the contributions of its members, yields an annual income of \$525. It is awarded each year by a Committee of the Faculty, selected by the Society, to a young woman graduate of that year, who is to pursue advanced study at some other institution approved by this Committee.

SCHOLARSHIPS

1. THE WESTBURY QUARTERLY MEETING, N. Y., SCHOLARSHIP pays all charges for board and tuition, and is awarded annually by a Committee of the Quarterly Meeting.

2. THE REBECCA M. ATKINSON AND THE BARCLAY G. ATKINSON SCHOLARSHIPS pay all charges for board and tuition, and are awarded annually by the Board of Managers of the College.

3. THE ANNIE SHOEMAKER SCHOLARSHIP pays all charges for board and tuition, and is awarded annually to a young woman graduate of Friends' Central School, Philadelphia.

4. There are nine other similar Scholarships owned by individuals, each entitling the holder to board and tuition at the College. These are awarded by the owners.

5. I. V. WILLIAMSON SCHOLARSHIPS FOR PREPARATORY SCHOOLS :

For the year 1900-1901 fifteen honor scholarships of the value of \$150 each for resident, and \$75 each for non-resident students will be offered to members of the graduating classes of 1900 of the following-named schools upon the conditions mentioned below :

2 to Friends' Central School,	Philadelphia, Pa.
1 to Friends' Seminary,	New York, N. Y.
1 to Park Avenue Friends' High School,	Baltimore, Md.
1 to Friends' School,	Wilmington, Del.
1 to Friends' High School,	Moorestown, N. J.
1 to Friends' Academy,	Locust Valley, N. Y.
1 to Friends' Select School,	Washington, D. C.
1 to Abington Friends' School,	Jenkintown, Pa.
2 to George School,	George School, Pa.
1 to Chappaqua Mountain Institute,	Chappaqua, N. Y.
1 to Swarthmore Preparatory School,	Swarthmore, Pa.
1 to Swarthmore Public High School,	Swarthmore, Pa.
1 to Martin Academy,	Kennett Square, Pa.

These scholarships will be awarded upon competitive examination under the direction of the College Faculty. None will be awarded to applicants who fail to be admitted without condition to the Freshman Class, and every holder of such scholarship must pursue in College the studies of one of the regular courses.

6. For the year 1900-1901 three honor scholarships are offered for work in the College as follows:

THE DEBORAH FISHER WHARTON SCHOLARSHIP: To that member of the Junior Class of 1899-1900 who, on promotion without condition to the Senior Class, shall have passed the best examinations on the regular work of the year; \$200, if resident; \$100, if non-resident.

THE SAMUEL J. UNDERHILL SCHOLARSHIP: To that member of the Sophomore Class of 1899-1900 who, on promotion without condition to the Junior Class, shall have passed the best examinations on the regular work of the year; \$200, if resident; \$100, if non-resident.

THE ANSON LAPHAM SCHOLARSHIP: To that member of the Freshman Class of 1899-1900 who, on promotion without condition to the Sophomore Class, shall have passed the best examinations on the regular work of the year; \$200, if resident; \$100, if non-resident.

If any of the Scholarships under 5 and 6 are not awarded, the funds thus released will be applied to Scholarships similar to those under 7.

7. For the benefit of students needing pecuniary aid, whose previous work has demonstrated their earnestness and their ability, the following are offered. They will be awarded at the discretion of the Committee on Trusts, Endowments, and Scholarships. About one-fourth of them will be available for new students for the year 1900-1901. Application for these should be made to the President.

THE SAMUEL WILLETS SCHOLARSHIPS: Sixteen scholarships of \$150 and ten scholarships of \$100 per year.

THE ISAAC STEPHENS SCHOLARSHIPS: Four scholarships of \$50 per year.

THE MARY WOOD SCHOLARSHIPS: Two scholarships of \$50 per year.

Admission

Application for admission should be made as early as possible by letter to the President.

All applicants must present satisfactory testimonials of good character from their former teachers, and students coming from other colleges must offer certificates of honorable dismissal.

The examinations for admission may be taken either in the summer at the close of the College year, or in the fall. See Calendar for the dates.

Students are not admitted for a period less than the current College year; but, when vacancies exist, they may enter at any time during the year.

Students admitted to the College are expected to abstain entirely from the use of tobacco.

Requirements for Admission

1. MATHEMATICS.—*Arithmetic*.—Entire.

Algebra.—To Permutations and Combinations in a book of High-School grade. (Hall and Knight's or C. Smith's Elementary text-book is suggested.)

Geometry.—The whole of Plane Geometry.

2. ENGLISH GRAMMAR AND COMPOSITION.

3. ENGLISH LITERATURE.

For 1900:

(1) A *general* knowledge of the following works and their authors: Tennyson's *The Princess*; Scott's *Ivanhoe*; De Quincey's *The Flight of a Tartar Tribe*; Pope's Homer's *Iliad*, Books I, VI, XXII, and XXIV; Lowell's *The Vision of Sir Launfal*; Cooper's *The Last of the Mohicans*; Dryden's *Palamon and Arcite*; *The Sir Roger de Coverley Papers* in *The Spectator*; Goldsmith's *The Vicar of Wakefield*.

(2) A *special* knowledge of the subject-matter, form, and structure of the following: Macaulay's *Essay on Milton* and *Essay on Addison*; Burke's *Speech on Conciliation with America*; Shakespeare's *Macbeth*; Milton's *Paradise Lost*, Books I and II.

For 1901 and 1902:

(1) A *general* knowledge of the following works and their authors: George Eliot's *Silas Marner*; Shakespeare's *Merchant of Venice*; Pope's Homer's *Iliad*,

Books I, VI, XXII, and XXIV; *The Sir Roger de Coverley Papers* in *The Spectator*; Goldsmith's *The Vicar of Wakefield*; Coleridge's *The Rime of the Ancient Mariner*; Tennyson's *The Princess*; Scott's *Ivanhoe*; Cooper's *The Last of the Mohicans*.

(2) A special knowledge of the subject-matter, form, and structure of the following works: Shakespeare's *Macbeth*; Milton's *L'Allegro, Il Penseroso, Comus* and *Lycidas*; Burke's *Speech on Conciliation with America*; Macaulay's *Essay on Milton* and *Essay on Addison*.

4. HISTORY.—A thorough preparation in the outlines of the History of the United States, and in *either* the History of England *or* in General History. Text-books suggested for preparation: McMaster's School History of the United States, Gardiner's School History of England, Myers's General History.

5. SCIENCE.—Two of the following: Botany, Chemistry, Physical Geography, Physics, Zoölogy, as presented in the better class of High-School text-books.

In addition to the above,

(1) *For the Course in Arts:*

LATIN.—Caesar, *Gallie War*, four books; Virgil's *Aeneid*, six books; Cicero, seven orations (including those against Catiline); Latin Grammar, the essentials, particularly paradigms and elementary syntax; Latin composition, the accurate translation into Latin of easy sentences involving words and constructions of frequent occurrence in Cicero's first oration against Catiline.

NOTE.—The attention of preparatory teachers is especially called to the importance of Latin composition as a foundation for college work.

GREEK.—Greek Grammar (Goodwin's recommended); elementary Greek Composition; Xenophon—four Books of the *Anabasis*; Homer—three books of the *Iliad*; General History of Greece to the death of Alexander.

For students who present the above, Greek will be *elective* after the Sophomore year. They will not be required to present science (5) for admission.

Candidates for the Course in Arts not offering Greek are required to present as a substitute French, Course I, page 42, or German, Course I, page 43, and to pursue the study of Greek during the entire four years of their College course. The class for beginners is formed in the Freshman year.

(2) *For the Courses in Letters, Science, and Engineering:*

Latin or French or German, as follows:

LATIN.—As required for entrance to the Course in Arts.

FRENCH.—French Grammar, including a thorough study of the different parts of speech and the general principles of Syntax; Super's *Preparatory French*

Reader; Sarcey's *Piano de Jeanne* and *Qui perd gagne*; Mme. Guizot's *Sur la Pente* (as found in Magill's *Modern French Series*, Vols. I and II); Mme. de Girardin's *La Joie fait Peur*, Scribe's *Bataille de Dames*, Sandeau's *La Maison de Penarvan*, Labiche's *La Poudre aux Yeux*, Vacquerie's *Jean Baudry* (as found in Bocher's *College Series of French Plays*, Vol. I); Corneille's *Cid*; Dictées; Prose Composition. Equivalents will be accepted.

GERMAN.—Thomas' Practical German Grammar, Part I; Grimm's *Märchen* (twelve selections); Eichendorff's *Aus dem Leben eines Taugenichts* (Chapters vii and viii omitted); Schiller's *Wilhelm Tell*; E. S. Buchheim's *Elementary German Prose Composition*; Freytag's *Die Journalisten*; one of Riehl's *Cultur-geschichtliche Novellen*; Goethe's *Iphigenia auf Tauris*; German ballads and lyrics (seven to be memorized). Equivalents will be accepted.

OPTIONS.—Candidates not prepared to offer the maximum amount of Latin, French, or German will be permitted to substitute *two* of the three languages, as follows: *Latin*—First Latin Book and four books of Cæsar. *French*.—Course I, page 42. *German*.—Course I, page 43. Equivalents will be accepted.

New Requirements for Admission

Beginning in 1901, for admission to *any* course it will be necessary for the applicant to present 1 to 4 inclusive, of the list of studies given below, and *four* of the remaining ten, as follows:

- (a) Elementary and advanced work in two languages.
- or (b) Elementary work in two languages, with advanced work in one of the two, and 13 *or* 14.
- or (c) Elementary and advanced work in one language, and 13 *and* 14.

For admission to the Course in Arts, 5 and 6 will be required.

- 1. Mathematics, as at present.
- 2 and 3. English, as at present.
- 4. History, requiring two of the following: United States, England, Greece, Rome.
- 5. Elementary Latin: First Latin Book; Cæsar, 4 books.
- 6. Advanced Latin: Æneid, Six books; Cicero, 7 orations; Latin Composition.
- 7. Elementary Greek: Grammar; Anabasis, Book I.
- 8. Advanced Greek: Anabasis, Books II, III, IV; Iliad, Books I, II, III.
- 9. Elementary German: Course I. See page 43.
- 10. Advanced German: Course II. See page 43.
- 11. Elementary French: Course I. See page 42.
- 12. Advanced French: Course II. See page 42.
- 13. Science, as stated in the present catalogue under 5.
- 14. Solid Geometry and Trigonometry (as presented in the text-books of Crockett, Murray, or Crawley).

No change is intended to be made in the total requirement in any language as at present formulated.

Admission by Certificate

Graduates of Friends' Schools and of public High Schools approved by the Faculty and Instruction Committee will be admitted to the Freshman Class on certificate of the Principal.

Principals of other schools who wish to have students admitted on their recommendation, should correspond with the President concerning each case.

Students admitted by certificate are received on trial, and the Faculty reserves the right to change their classification or to decline to continue their connection with the College if they are found not properly prepared to do the work.

The privilege of sending students on certificate will be withdrawn from any school whose pupils are found not properly prepared.

Departments of Instruction

ALPHABETICALLY ARRANGED

For tabular statement of Courses of Study leading to the Bachelor's Degree, see pp. 53-57.

Biblical Literature

JESSE H. HOLMES, *Professor*

Beginning with the college year 1900-1901, the following courses will be offered in Biblical Literature:

1. Assigned Readings in the Old Testament, supplemented by recitations and lectures; one period per week, required of Freshmen.
2. Assigned Readings in the New Testament, supplemented by recitations and lectures; one period per week, required of Sophomores.
3. Detailed study of selected portions of the Bible; two periods per week, elective for Juniors and Seniors.

Courses 1 and 2 will involve a connected history of Biblical peoples and literature. Course 3 will be devoted to the Old and New Testaments in alternate years, and special attention will be paid to the development of ethical thought in the Old Testament, and to the culmination of that development in the New Testament.

Biology

SPENCER TROTTER, *Professor*

The course in Biology embraces the subjects of Zoölogy and Botany; Mammalian and Human Anatomy; Physiology; Vertebrate Morphology and Development (Embryology); and Normal Histology.

While it is designed to give a broad and liberal view of the facts and problems of life as a part of the system of general culture, the

course in Biology is especially valuable to students who are looking forward to the study of Medicine.

Lectures, demonstrations, and text-books are used in connection with laboratory work. The course is arranged as follows:

FRESHMAN CLASS

1. ELEMENTS OF ZOÖLOGY, four periods per week the first semester. Lectures and laboratory work covering the practical study of the main types of vertebrates and invertebrates, and the consideration of the problems of geographical distribution, environment, heredity, structure, function, and development. Text-books: Kingsley's *Comparative Zoölogy*; Trotter, *Abstract of Zoölogy*.

2. ELEMENTS OF BOTANY, four periods per week the second semester. Lectures and laboratory work. Examination of the tissues of the plant, and consideration of the physiology of cell-life and of plant morphology. This includes a course in Economic and Agricultural Botany. Text-books: Potter's *Agricultural Botany*; Gray's *Botany*. (Students desiring to do more advanced work in the study of plant structure will be given an opportunity by making special arrangements with the Professor.) The course in Botany and Zoölogy embraces a working knowledge of the microscope.

JUNIOR CLASS

MAMMALIAN AND HUMAN ANATOMY AND PHYSIOLOGY. Dissection of the Cat as a type; osteology, myology, visceral anatomy, the blood-vessel system, and the brain and nervous structures. Detailed study of the human skeleton and the various structures of the human body as compared with the lower animals.

Lectures and demonstrations. Text-books: Mivart's *The Cat*; Jayne's *Mammalian Anatomy*; Huxley's *Physiology*. Reference books: Gray's *Anatomy*; Foster's *Text-book of Physiology*. The course throughout the Junior year consists of eight periods per week.

SENIOR CLASS

1. VERTEBRATE MORPHOLOGY. Advanced dissection of vertebrate types. Text-books: Martin and Moale's *Handbooks of Vertebrate Dissection*; Huxley's *Comparative Anatomy of Vertebrates*.

2. NORMAL HISTOLOGY. Microscopical examination and study of animal tissues.

3. EMBRYOLOGY. Text-book: Foster and Balfour's *Elements of Embryology*.

Course in Geology, Sanitary Science and Hygiene

A course in Geology is given two periods per week in the Sophomore year, first semester, and is elective for all students above the Freshman Class. It embraces a study and practical examination of all the important types of rocks; lectures on structural and dynamical geology; study of geological horizons, etc.

During the second semester the course is in Sanitary Science and Hygiene.

Chemistry

WILLIAM C. DAY, *Professor*

The course in Chemistry extends through a period of four years. The completion of this course will enable the graduate to enter at once upon a university career as candidate for the degree of Doctor of Philosophy; to enter upon professional work as analytical or technical chemist; or to engage in teaching chemistry in a fully equipped secondary or college preparatory school.

Those who may desire to continue their study beyond the limit of the college course will have suitable work assigned them and will be provided with every facility for carrying it on.

The Chemical Laboratory occupies a part of Science Hall; it includes rooms for work in general chemistry, qualitative and quantitative analysis, and organic chemistry; also a commodious experimental lecture room, balance rooms, library, a research laboratory, a basement room for assaying and metallurgy, and storerooms for apparatus and chemicals.

Laboratory supplies are in great part imported duty free from Germany, and are in all cases selected with reference to use in the most modern methods of analysis or of experimental demonstration in the lecture room and laboratory. The balances in use are of the best Troemner pattern, and from the very beginning the student in

quantitative analysis is allowed to use only the most exact instruments for weighing, thus cultivating from the start the delicacy of manipulation so essential to the attainment of precision in scientific work.

Chemical Library.—Conveniently located with respect to the various working rooms is a library of standard works of reference, chemical dictionaries, current journals (including a number of complete sets of the latter), and such books as Beilstein's *Handbook of Organic Chemistry*, Allen's *Commercial Organic Analysis*, technical chemistries, etc.

Text Books.—From the beginning the student is taught to regard the text-book as an aid to the comprehension of phenomena and general principles in the science, and as subordinate to actual laboratory contact with substances and the direct study of their changes. *The thing itself and not the word representing it must form the mental picture.* The following books are at present in use: *Elementary Chemistry*, Greene and Keller; *Qualitative Analysis*, Medicus; *Introduction to the Study of Carbon Compounds*, Remsen; *Quantitative Chemical Analysis*, Talbot, for beginners, Fresenius, for advanced students; *Theoretical Chemistry*, Remsen; *Modern Theories of Chemistry*, Ostwald, translated by Walker. In special lines of work, such as iron and steel analysis and technical analysis in general, such special works are used as the subjects call for.

The course is arranged as follows:

FRESHMAN CLASS.—*a. Lectures (Experimental).*—General Elementary Chemistry (non-metals and metals), with examinations.

b. Laboratory Work.—Special exercises on topics selected with the object of stimulating intelligent experimentation.

SOPHOMORE CLASS.—*a. Lectures.*—Theoretical Chemistry, followed by Qualitative Analysis.

b. Laboratory Work.—Qualitative, followed by Quantitative Chemical Analysis.

JUNIOR CLASS.—*a. Lectures.*—Chemistry of the compounds of carbon.

b. Laboratory Work.—Quantitative Analysis, followed by a number of exercises in important, typical, organic transformations.

SENIOR CLASS.—The work of the Senior year consists of a course in physical chemistry, using Walker's translation of Ostwald's *Outlines of General Chemistry as text-book*, and laboratory work in such department of analytical chemistry as may best suit the future interest or occupation of the student. Such work involves a certain amount of study of current chemical journals. Meetings are held from time to time for the purpose of considering discoveries and investigations of importance and general interest.

Drawing and Painting

BEATRICE MAGILL

A course of Freehand Drawing and Painting is open to all. Aside from its intrinsic value as a means of culture it leads to habits of close observation, and is a very important adjunct to the other courses, especially to those of Engineering and Science.

The work of the department consists of drawing from objects and casts, painting from still life, flowers, etc., and a series of lectures on the History of Painting. A sketch class is open to students qualified to work in it. It is held one afternoon a week for out-door sketching in spring and autumn.

As the teaching in this department is altogether individual, suited to the special needs of each student, and not class work, there is no course marked out for each class, but every student must pursue the following graded course:

Drawing from geometrical objects; still life; cast of ornament; cast, details of figure; cast, head or figure.

After a sufficient training in drawing the student may pass to painting (either in water-color, oil, or pastel) from still life, flowers, and out-door sketching.

History of Painting .

COURSE I.—(*Elective*), *two periods a week*.

First Semester:—Early Italian Painting.

Second Semester:—Later Renaissance Painting in Italy.

COURSE II.—(*Elective*), *two periods a week.*

First Semester:—Flemish and Dutch Art.

Second Semester:—Art in Germany, Spain, France, and England.

The courses are given in alternate years.

Students are required to present written abstracts upon the subjects under consideration.

Engineering and Mechanic Arts

WILBUR M. STINE, *Professor*

FRANK E. CRAIG, *Assistant*

EDWIN HAVILAND, JR., *Assistant*

The course in Engineering and the Mechanic Arts is designed to afford a thorough general training for students who intend to engage in the professions of Civil, Mechanical, or Electrical Engineering.

The location of the College is most favorable for engineering students; its ready access to Philadelphia and to the many important manufacturing cities in the vicinity affords opportunities for instructive visits to a great variety of industrial and engineering works.

The course of instruction in both the theory and practice of Engineering is arranged with the view of furnishing to its graduates a liberal preparation for immediate usefulness in the office, works, or field, in more or less subordinate positions. By adding familiarity with commercial demands and practices to the theory and practice of the school, they may successfully undertake the design of machinery, the superintendence of works, or the conduct of an engineering enterprise.

The instruction is given both by lectures and recitations, and in the exercises in the field, shop, laboratory, and draughting-room there is constant opportunity for individual instruction. Throughout the entire course the student is familiarized with the methods and processes of the Mechanic Arts by systematic instruction in both wood and metal working. The object is to avoid mere manual routine in such exercises, and to make them a means for the development of the powers of observation and judgment, as well as for the acquisition of mechanical skill.

SINCE the preparation of the matter for this Catalogue, a friend of the College has presented to it an Olsen Testing Machine of one hundred thousand pounds capacity, which will be installed in time for the use of the engineers of the class of 1900. This machine is adapted to a very wide range of work in both tensile and compression tests, and, together with the smaller one already in use, will bring the equipment of the Engineering Laboratory to a high degree of completeness.

The field equipment of the department is ample for practice in surveying and locations, and opportunity is given the student to become familiar with the use and adjustment of the apparatus.

The Draughting-Rooms are large, well-lighted, and furnished with adjustable tables, models, etc., and are open for work during the greater part of the day.

The Engineering Laboratory contains a ten-horse power vertical steam engine and boiler, an Olsen's testing-machine, arranged for tensile, compressive, and transverse tests, steam engine indicators, apparatus for hydraulic and steam-engine experiments, and other valuable instruments and appliances.

SHOP WORK. This portion of the work holds an important place in the general engineering course, being pursued through the first three years. It is not desired to impart the skill of the trained workman, but rather to lay a foundation in the elements of shop practice upon which mature judgment and observation may establish successful practice.

The course in wood-working covers instruction in joining, framing, and wood-turning. This preliminary work is followed by the elements of pattern making.

The work in forging is based on a set of exercises involving drawing, bending, upsetting, welding, and tempering. This course is followed by a short one in foundry practice.

Machine practice is pursued through two years of the course. During the first year practice is given in bench and vise work, followed by lathe work, and exercises on the planer, shaper, and universal milling machine. The various set exercises also involve tapping, screw cutting, and work to standard gauges.

During the second year, after completing the design and draft of a machine, such as a lathe, small pump, or engine, the project is completely constructed, affording the student a thorough experience in shop construction.

The Machine Shop contains an excellent assortment of tools, including screw-cutting engines lathes, speed lathes (simple and back geared), an iron planer, a complete universal milling machine, a set of milling cutters, a shaper, a twist-drill grinder, upright drills, an emery grinder, a mill grinder, lathe centre grinder, vises (plain and

swivel), lathe chucks (combination, independent, scroll, and drill), a milling machine chuck, a rotary planer chuck, planer centres, a set of Bett's standard gauges, surface plates (Brown & Sharpe), sets of twist drills, reamers, mandrels, screw-plates, taps and dies, a complete set of steam-fitters' tools, with pipe vise, ratchet drill, etc., together with the many necessary small tools, hammers, chisels, files, etc. Additions are constantly being made to this collection as they are needed, either by manufacture in the shops or by purchase. Power is furnished by a 10x24 Corliss steam engine and a 60-horse power return tubular boiler, the former fitted with an improved indicator, and the latter with the necessary attachments for determining its efficiency, etc.

The Wood-Working Shop contains benches with vises and sets of wood-working tools, grindstone, and wood-turning lathes.

The Smith Shop contains forges, anvils, and sets of blacksmith tools, bench, and vise.

The Foundry contains a brass furnace, moulders' benches, a variety of patterns, and full sets of moulders' tools.

The details of the course vary somewhat from year to year, but in general are represented by the following arrangement of the studies:

FRESHMAN CLASS

DRAFTING—Use of Instruments and Elements of Structural and Machine Drawing; Representation of Materials of Construction; Projections; Pen Lettering; Drawings from Objects, these being the Exercises in Wood-Working and Machine Practice, with Tracings and Blue Prints.

SHOP WORK—Wood-Working, Forging, and Founding.

SOPHOMORE CLASS

DRAWING—Plates in the course in Descriptive Geometry; Tinting; Pen Topography. Complete Working Drawings, Tracings, and Blue Prints from a simple Machine or Structure.

SHOP WORK—Vise Work; Chipping and Filing; Machine Practice.

DESCRIPTIVE GEOMETRY—The Point, Right Line and Plane; Figures of Revolution; Intersections. (First Semester.)

SURVEYING—Theory and Practice; the Use and Adjustment of Instruments. (Second Semester.)

GRAPHICS—The Elements of Graphical Statics and the Investigation of Simple Structures.

JUNIOR CLASS

- MECHANICS OF MATERIALS—Theory of Electricity; Stresses and Strains; Applied Mechanics of Materials of Construction.
- MACHINE DESIGN—Kinematics; Simple Machines.
- STRUCTURES—The Materials of Construction.
- THERMODYNAMICS—Theory of the Heat Engine; Steam and Gas Engines.
- SURVEYING—Field Practice with Level, Transit, and Plane Table; Stadia Surveying.
- SHOP WORK—Preparation of Working Drawings, and the Construction of a Machine Project, such as a Lathe Head.
- LABORATORY—Quantitative Determinations in the Mechanics of Materials; Experimental Work with the Steam Engine, including Valve Setting.

SENIOR CLASS

- RAILWAY AND ROADWAY ENGINEERING—Surveys and Study of Construction; Railway Economics; Theory of curves.
- HYDRAULICS—Mechanics of Fluids; Theory and Practice of Water Motors.
- THEORY OF ERRORS—General Discussion; Application to Engineering Calculations.
- SPECIFICATIONS—The Preparation of Complete Specifications for a Structural Project, including Drawings and Estimates.
- METALLURGY—Lectures on the Metallurgy of Iron and Steel.
- DRAWING AND DESIGN—The Design of a Structure or a Machine with full Working Drawings, Tracings, and Blue Prints. Bridge and Roof Truss Design.
- POWER PLANTS—Steam and Hydraulic Plants; Electric Lighting and Power Plants.

English Language and Literature

WILLIAM HYDE APPLETON, *Anglo-Saxon and World Literature*

JOHN RUSSELL HAYES, *English Literature, Rhetoric, and Composition*

MYRTIE E. FURMAN, *Elocution and Oratory*

The course in English Literature extends through three years, instruction being given by recitations and lectures. During this time the English Language is studied in connection with the Literature from the Anglo-Saxon period down to the present day. The particular feature of the course is the critical reading in the class-room of representative authors, such as Chaucer, Spenser, Shakespeare, Milton, Pope, Wordsworth, Tennyson, Emerson, and Whittier. Peculiarities of style and language are considered, and

every effort made for a thorough comprehension of the work in hand. The author's life is studied in its relations to the history of the times, and his works are compared with those of his contemporaries. By this course it is expected that the student will be enabled to form an intelligent estimate of the style and merits of the great authors of English Literature.

So far as practicable, the work in Literature, in Rhetoric and Composition, and in Elocution and Oratory, is co-ordinated. The subjects for essays are drawn in part from the work in Literature; and in Elocution and Oratory the development of intelligent oral expression is considered to depend upon the study, as literature, of the selections read.

The courses are as follows:

a. English Literature.

FRESHMAN CLASS.—Prose: Lamb and Ruskin; Poetry: Wordsworth, Shelley, Keats, Tennyson, Arnold, and Whittier.

The aim here, as throughout the course, is towards intellectual discipline and spiritual insight, no less than towards an appreciation of literary values. Portions of other authors are read; and a short historical survey of the Greek and Roman literatures is given, in order to illustrate the debt of the English to the earlier great literatures.

SOPHOMORE CLASS.—Marlowe's *Edward II* and parts of *Tam-burlaine*; Lodge's *Rosalynde*; selected plays of Shakespeare, with comparative study of his predecessors; Milton's poems and parts of his prose; and selections from Herbert, Herrick, Pope, Gray, Cowper, and Burns.

Lectures on Elizabethan literature, and on the authors of the periods following.

For the Sophomore Engineers a separate course is given, in which are read representative authors from Chaucer to Arnold.

JUNIOR CLASS.—First Semester: Anglo-Saxon; Sweet's Primer, Cynewulf's *Elene*, Lectures on the Anglo-Saxon period.

Second Semester: Chaucer; Spenser's *Faery Queene*; Outside-reading of contemporary authors; Lectures on the Transition and Middle English periods, and on the Development of the English Language.

Besides the required class work there is in all classes opportunity offered for students to pursue additional reading and investigation under the direction of the professors.

b. World Literature.

This Elective, of four hours per week, is open to Seniors and Juniors. It is a course in the study of great classics, other than English, belonging to ancient and modern literature. The first semester is devoted mainly to Homer—the Iliad and Odyssey—and to the Greek Drama; the second semester mainly to Dante. The course is conducted through the medium of standard English translations together with lectures by the Professor, and oral discussions and written abstracts by the students.

c. Rhetoric and Composition.

FRESHMAN CLASS.—Practice in clear and logical expression. Text-book, Baldwin's *Expository Paragraph and Sentence*.

SOPHOMORE CLASS.—Forensic and narrative writing. Text-book, Ringwalt's *Modern American Oratory*.

JUNIOR CLASS.—Advanced study of invention and expression. Preparation of special themes. Lectures on Prose Style.

SENIOR CLASS.—The preparation of graduating theses.

d. Elocution and Oratory.

The aim in this course is to stimulate mental activity, to cultivate the imagination, and to arouse the sensibilities, the theory being that effective expression is a result of vivid mental impressions. Hence the student is given exercises whereby he learns to utilize his experiences, to vivify his thought, and thus enter into the spirit of the literature and make it a part of himself. Due attention is given to voice culture, and to certain phases of physical training which tend to bring the body into harmony with the mind and to make it a more perfect instrument of expression.

The course extends through four years, and consists of voice culture and drill in enunciation; original work, including extemporaneous speech; recitation of typical orations in connection with the

work required under Rhetoric and Composition ; careful interpretation of Shakespeare and other standard authors.

During the college year there are several contests in oratory and declamation, open to all students, which stimulate oratorical zeal.

French Language and Literature

EDWARD HICKS MAGILL, *Professor*

CHARLES F. WOODS, *Assistant*

From the beginning to the end of the five courses in French careful attention is given to the pronunciation of the language, to conversation, and to writing dictées, as well as to a thorough study of the grammar and the translation into good English of the leading works of French writers in both the classical and modern periods. After the first year's study International Correspondence is made an important feature during the remainder of the course.

A general outline of the work may be given as follows, but the text-books used are liable to be varied from year to year.

COURSE I. French Grammar, including a thorough study of the forms of the different parts of speech, and the general principles of Syntax. Super's *Preparatory French Reader*; Magill's *Modern French Series*, Vol. II; Dictées; familiar conversation in French, and simple themes translated from English into French.

COURSE II. French Grammar reviewed and continued; Magill's *Modern French Series*, Vol. I; Bocher's *College Series of French Plays*; Corneille's *Cid*; Translations from English into French; Conversations; Dictées. International Correspondence begun.

COURSE III. Magill's *Modern French Series*, Vol. IV; Racine's *Athalie*; Moliere's *Misanthrope*; Hugo's *Hernani*; Translations from English into French; Conversations; Dictées. International Correspondence continued.

COURSE IV. Magill's *Modern French Series*, Vol. III; Balzac's *Eugénie Grandet*; Hugo's *Ruy Blas*; Moliere's *Bourgeois Gentilhomme*; Translations from English into French; Conversations; Dictées. International Correspondence continued.

COURSE V. Moliere's *Les Femmes Savantes* and *Les Précieuses Ridicules*; Victor Hugo's *Les Misérables* (Sumichrast); Racine's *Iphigénie*, *Britannicus*, and *Esther*. Other authors added from year to year. Translations from English into French; Conversations; Dictées. International Correspondence continued.

German Language and Literature

MARIE A. K. HOADLEY, *Professor*

CHARLES F. WOODS, *Assistant*

The course of study in this department is designed to give the student (1) a facility in reading German, (2) an ability to speak simple German grammatically, (3) an acquaintance with the social and intellectual development of the Germans, from the earliest times, as revealed by the great exponents of their literature.

In the class-room oral translation into English is discontinued as soon as possible, and expressive reading of the German text is substituted. A course in written translation into German is followed by a course in free German composition, carried on in part by actual correspondence with Germans.

The instruction concerning the history of German Literature is given in German and the examinations thereon conducted solely in that language.

COURSE I. Thomas's Practical German Grammar, Part I; Grimm's *Märchen* (twelve selections); Eichendorff's *Aus dem Leben eines Taugenichts* (Chapters VII and VIII omitted); E. S. Buchheim's Elementary Prose Composition, Part I; Schiller's *Wilhelm Tell* (first three acts).

COURSE II. Thomas's Practical German Grammar (reviewed and continued); Schiller's *Wilhelm Tell* (completed); one of Riehl's *Culturgeschichtliche Novellen*; Freytag's *Die Journalisten*; Goethe's *Iphigenia auf Tauris*; E. S. Buchheim's *Elementary Prose Composition* (Parts II and III); German ballads and lyrics (seven to be memorized.)

COURSE III. Schiller's *Wallenstein* (ed. Carruth); Heine's *Harzreise*; Freytag's *Aus dem Staat Friederichs des Grossen*. Lec-

tures on the history of German Literature. Private reading: Selections from Scherer's *History of German Literature*; Nevinson's *Life of Schiller*.

COURSE IV. Goethe's *Götz von Berlichingen*; Freytag's *Doktor Luther*; Goethe's *Egmont*; Lessing's *Nathan der Weise*. Lectures on Goethe. German prose composition. Private reading: Sime's *Life of Goethe*; Baumbach's *Der Schwiegersohn*.

COURSE V. Goethe's *Dichtung und Wahrheit* (six books); Schiller's *Historische Skizzen*; Freytag's *Bilder aus der deutschen Vergangenheit* (selected portions); Goethe's *Torquato Tasso*. Lectures on *Faust*. Private reading: Taylor's *Studies in German Literature*; Francke's *Social Forces in German Literature*; von Scheffel's *Der Trompeter von Säckingen*.

Greek

WILLIAM HYDE APPLETON, *Professor*
ALICE M. ATKINSON, *Assistant*

At least four years of Greek are required of all candidates for the degree of Bachelor of Arts. Those who present the usual entrance requisition (see p. 28), will be required to continue the study for two years in college, with opportunity of electing it for the remaining two years, as follows:

FRESHMAN YEAR (*Required*).—*Herodotus*, Books VI and VII; or *Thucydides*. Study of Persian and Peloponnesian Wars. *Homer*, The Odyssey, Books IX, X, XI, XII. Sight reading in other parts of the poem.

SOPHOMORE YEAR (*Required*).—*Plato*, Apology and Crito with parts of Phaedo. Study of Socrates from Xenophon and Plato. Exercises in Greek composition based upon texts read. *Æschylus*, Prometheus; or *Sophocles*, Antigone. Study of the Greek Drama.

JUNIOR YEAR (*Elective*).—Greek oratory—*Lysias*, *Isocrates* or *Demosthenes*, with study of Greek history to the death of Alexander. *Euripides*, Alcestis, or Iphigenia among the Taurians.

SENIOR YEAR (*Elective*).—*Aristophanes*, one play. *Theocritus*, selected Idylls. Lectures on Greek literature. A short course in Modern Greek as follows: Gardner's *Short and Easy Modern Greek Grammar*; Modern Greek Ballads; Anna Sewall's *Black Beauty*, as published in Modern Greek. Newspaper Greek, illustrated by the *Atlantis*.

The above statement is intended to give a general idea of the range of work done in the Greek department. Circumstances may at times require the authors named above to be read in a different order, and some substitutions may also be made.

BEGINNERS IN GREEK

To students who present no Greek for admission an opportunity is offered to begin the language in College. But such students, in order to graduate with the degree of Bachelor of Arts, must have presented, on admission to College, the alternative for the Greek requirement (p. 28), and must continue Greek during the entire four years of College, as follows:

FRESHMAN YEAR.—The Grammar, with thorough drill on forms, oral and written. *Xenophon*, Anabasis, Book I. Some chapters of the Greek Testament.

SOPHOMORE YEAR.—*Xenophon*, Anabasis, Books II, III, IV. *Homer*, Iliad, Books I, II, III. Sight Reading. Greek Composition.

JUNIOR AND SENIOR YEARS.—The work for these two years will be selected from the advanced courses named above.

History and Political Economy

The group of studies included within this department—History, Economics, Politics and Social Science—is designed to furnish information necessary for intelligent citizenship, and to provide a preliminary training for those who intend to engage in the practice of law, journalism, business, or the public service. Instruction is given by means of lectures, text-books, and collateral reading, and oral and written reports by the students on assigned topics. In the upper

classes each student is required to make an independent and detailed study of some assigned or chosen subject; for this purpose the library contains a good working collection of public documents and reports, both Federal and State, in addition to standard treatises.

Beginning with the year 1900-1901 the following courses will be offered:

HISTORY AND POLITICS

COURSE I. *Dr. Hull*, Ancient Orient, Greece, Rome. Open to Freshmen.

COURSE II. *Dr. Holmes*, Middle Ages, Renaissance, Reformation. Open to Sophomores and Freshmen.

COURSE III. *Dr. Hull*, England: its History, Government, and Industry. Open to Juniors and Sophomores.

COURSE IV. *Dr. Holmes*, The Old Régime and the French Revolution; Europe in the Nineteenth Century. Offered in 1900-1901. Open to Seniors and Juniors.

COURSE V. Problems in American History; United States Biography; Modern Colonization. Offered in 1901-1902. Open to Seniors and Juniors.

Courses IV and V will be offered in alternate years.

ECONOMICS AND SOCIAL SCIENCE

WILLIAM I. HULL, *Professor*

COURSE I. Elements of Economics; Industrial Problems of To-day (including Labor Organizations; Strikes, Lock-outs, and Arbitration; Immigration; Coöperation and Profit-Sharing; Employers' Care for Employees; Laborers' Insurance; The Unemployed; The Eight-Hour Day; Women and Children in Industry; Monopolies and Trusts.) Open to Sophomores and Juniors.

COURSE II. Taxation, Protection and Free Trade. Money and Bimetallism. Banking. Offered in 1900-1901. Open to Juniors and Seniors.

COURSE III. Socialism: its History and Claims. Industrial Reformers of the Nineteenth Century; Municipal Problems. Offered in 1901-1902. Open to Juniors and Seniors.

Courses II and III will be offered in alternate years.

COURSE IV. Elements of Sociology. Social Problems of To-day (including Crime and Punishment; The Insane and Feeble-Minded; Pauperism and Charity; Tenement Houses; Womanhood and the Family; The Children of the Poor; Social Settlements; Intemperance and Methods of Temperance Reform; Salvation Army's Social Work; The Negro and the Indian; War and Peace). Open to Seniors, and to Juniors who have had Course I.

Latin

FERRIS W. PRICE, *Professor*

FRESHMAN CLASS.—*Horace*, Odes; *Cicero*, Letters; Latin Composition, based on Cicero's Letters; Mythology.

SOPHOMORE CLASS.—*Horace*, Satires and Epistles; *Livy*, Books I, XXI, XXII; History of Latin Literature, lectures, and study of illustrative passages from the most important authors.

JUNIOR CLASS.—Inscriptions and other remains of Early Latin; *Plautus*, *Trinummus*; *Terence*, *Phormio*; *Cicero*, *De Senectute*; Hymns and other late Latin.

SENIOR CLASS.—Selections from *Lucretius* and *Catullus*; *Juvenal*, three satires; *Tacitus*, *Agricola*. The second semester is devoted to a comprehensive study of *Virgil*, with reading of extensive selections from all of his works, but with special attention to the *Georgics* and *Æneid* VII-XII.

The Freshman, Sophomore, and Junior courses are required of all Arts students, and are elective for all others whose preparation is sufficient. The Senior work is elective.

In addition to the above regular courses, there is offered to properly qualified Letters and Science students a special elective including a year's work in *Cicero's* orations and the *Metamorphoses* of *Ovid*, together with exercises in Latin composition based on *Cicero's* oration, *Pro Roscio Amerino*.

Sight-reading and other collateral work throughout the course.

Mathematics and Astronomy

SUSAN J. CUNNINGHAM, *Professor*

EDWIN HAVILAND, JR., *Assistant*

FRESHMAN CLASS.—(1) Solid Geometry (Phillips and Fisher); Plane Trigonometry (Loney). Required in all courses.

(2) Treatise on Algebra (C. Smith), Chapters XIX–XXXII, with omissions. Required in Engineering course.

SOPHOMORE CLASS.—Course (2) above, required in Arts and Science courses, elective in Letters course; Conic Sections (C. Smith), and Differential Calculus (Edwards), required in Engineering course.

JUNIOR CLASS.—Edwards's Integral Calculus; Chauvenet's Spherical Trigonometry.

ELECTIVE COURSES

1. Modern Pure Geometry. An advanced course in pure geometry; subjects treated: Harmonic Ranges and Pencils, the theories of Involution, Perspective, Similar Figures, Reciprocation, Inversion, etc.

2. Higher Algebra, beginning with the Theory of Equations (Burnside and Panton) and continuing with Invariants, etc.

3. Plane Analytic Geometry, including Higher Plane Curves; the course will be a continuation of Conic Sections and will be based on Clebsch-Lindemann's *Geometrie*.

4. Solid Analytic Geometry (Charles Smith).

5. Curve Tracing.

6. Differential Equations.

7. Trigonometric Series, Spherical Harmonics, etc. (Byerly).

8. Elementary Quaternions (Kelland and Tait).

9. Advanced Trigonometry (Loney).

10. Young's General Astronomy.

11. Chauvenet's Spherical and Practical Astronomy.

12. Theoretical Astronomy (Orbit Determination).

Pedagogy

PRESIDENT BIRDSALL.

This course is offered in 1899-1900, and will be given in alternate years hereafter. It is elective for members of the Junior and Senior Classes who are preparing to teach. The work consists of a careful study of the history of educational progress from the times of Comenius; lectures on the history of education in America and on the present school systems; a study of method as it is presented in the works of De Garmo and McMurry, and as it is to be observed in contemporary schools; and of the Psychological Foundations of Education as presented in the work of William T. Harris; a special study is made of the doctrines of Froebel and Herbart. The course in Psychology is closely related to that in Pedagogy, and may be regarded as constituting a part of it.

Physical Training

FOR YOUNG MEN

W. S. CUMMINGS, M. D., *Director*

FOR YOUNG WOMEN

MARY V. MITCHELL GREEN, M. D., *Director*

SARAH BROOKE FARQUHAR, *Instructor*

The system of Physical Training is based upon thorough and careful examination of each student. The record of measurements and other tests affords a means of noting progressive development, and is, in large part, the basis upon which exercises are prescribed. Particular attention is given to all individuals whose physical development is below the normal, special work being prescribed for such, in order to produce, as far as possible, an evenly developed and healthy organism.

All athletic sports are under the immediate supervision of the Directors and only those students who are in proper physical condition are allowed to participate. Great care is also taken to keep games and athletic contests within such limits as will make them only a proper means of exercise and recreation, and thus a real assistance to the work of the College.

Physics

GEORGE A. HOADLEY *Professor*

The Physical Laboratory is provided with apparatus for determinations in the mechanics of solids and fluids, in heat, sound, light, electricity, and magnetism; as also with a large amount for lecture experiments. Most of this has been selected with care from the best American and foreign makers, but some is of home manufacture. The co-operation of the Engineering Department and the increasing skill of our students enable us to make each year a larger proportion for regular use in the Laboratory. It is our aim to afford students continued opportunities for instruction in the principles of construction of ordinary and special apparatus. Power for running dynamos and for other purposes is near at hand. The instruction begins in the Sophomore year, and extends through the course as follows:

FOR STUDENTS IN ARTS AND LETTERS

SOPHOMORE CLASS.—*General Physics*.—This course consists of the investigation of the general laws of Physics and the consideration of their practical application.

The work of the course is done by lectures and recitations, accompanied by experimental verification of the laws discussed, and extends over the entire year.

JUNIOR CLASS.—During the Junior year the course is an elective in Heat, Magnetism, Electricity, and Light.

FOR STUDENTS IN SCIENCE AND ENGINEERING

This course is intended to be pre-eminently a practical course, consisting largely of laboratory work, in the investigation and verification of the laws of Physics.

The recitation work covers the topics treated in Ganot's Physics, or other text-book of equal rank, and is supplemented by lectures on the various branches of the subject.

The division of the work is as follows:

SOPHOMORE CLASS.—Applied Mechanics and Dynamics. Gases, Liquids, and Sound.

-114205

JUNIOR CLASS.—Heat, Magnetism, Electricity, and Light.

SENIOR CLASS.—Applied Electricity—an elective of eight periods per week, counting as four, and supplementing the Junior work in Magnetism and Electricity by the practical study of their application to the telephone, telegraph, dynamo, electric light, motor, transmission of power, etc.

Work in the manufacture and use of these various appliances, as well as in the measurement of the electrical current, is accompanied by text-book work in Thompson's *Dynamo Electric Machinery*, and by reading and class discussion of current electrical journals. Visits to the electrical plants of the neighboring villages and cities are made at convenient times, for the purpose of studying the machinery in actual use.

Psychology and Philosophy

This course is required of Senior students in Arts, Letters, and Science.

FIRST SEMESTER.—Psychology.—This course is introduced by a brief but thorough study of Brain Physiology and of the organs of special sense from the text-book, from models, and by means of dissections, *Dr. Trotter*. There follows an inquiry into the conditions of states of consciousness intended to give a broad view of the facts. James's *Psychology* (Briefer Course) has been used as a text-book, but the work is by no means confined to it. This part of the course has been under the care of President Birdsall; in 1900-1901 it will be conducted by Dr. Holmes.

SECOND SEMESTER.—Philosophy, *Dr. Hull*. (In 1900-1901, *Dr. Holmes*.) The work in Philosophy is a historical study of the development of human thought, using Weber's text-book as a basis. Each important system is studied at least in outline, and especial attention is given to the ethical bearings of the more prominent.

Courses of Study

From the work of the different departments, as outlined in the preceding pages, every candidate for the Bachelor's degree will be required to complete one of the following four Courses of Study. They have been arranged with the view of making them as nearly as possible equivalent in amount of work involved, and each is intended to insure broad and liberal culture, while it provides opportunity for extended study in one chosen field. The following studies, required, with few exceptions, in at least one of the courses, are offered as *elective* in the others. The freedom of election will sometimes be restricted by the exigencies of the college program :

Astronomy,	Geology and Sanitary Science,
Biblical History and Literature,	German,
Biology,	History,
Chemistry,	Latin,
Drawing and Painting,	Mathematics,
History of Painting,	Pedagogy, *
Economics,	Physics,
Elocution,	Social Science,
English,	World Literature.
French,	

Irregular Courses of Study can be pursued only in special cases and by approval of the Faculty. In the absence of definite arrangement in advance, students will be required to take the studies of one of the regular courses.

Partial Courses of Study.—A limited number of teachers and other persons of fair education and of sufficiently mature age who may wish to improve themselves in particular studies will be received without examination, and will be allowed to elect, in any of the regular classes, such work as they can pursue to advantage. They should in all cases correspond with the President in advance.

The Course in Arts

The characteristic feature of this course is the study of Classical Antiquity, including the language and literature of the Greeks and Romans, with their art, philosophy, religion, and political and social history. While this course affords that broad culture which should be the foundation of any subsequent career, it may be made to afford special preparation for law or journalism by including electives in History and Economics; or it may be directed toward the study of Medicine by choosing electives in Biology and Chemistry. This course leads to the degree of *Bachelor of Arts*.

Freshman Year

FIRST SEMESTER. PERIODS.		SECOND SEMESTER. PERIODS.	
Greek,*	4	Greek,*	4
Latin,	4	Latin,	4
Mathematics,	4	Mathematics,	4
Biology† or History,†	4	Biology† or History,†	4

Bible Literature, 1; Composition, 1; Elocution, 2.

Sophomore Year

Greek,*	4	Greek,*	4
Latin,	4	Latin,	4
Mathematics,	4	Two of the following:	
History† or Physics,†	4	English, . . . 4; History, . . . 4	} 8
		Mathematics, . . . 4; Physics, 4	

Bible Literature, 1; Composition, 1; Elocution, 2.

Junior Year

See page 52 for list of Electives.

Greek, or Elective,*	4	Greek, or Elective,*	4
Latin,	4	Latin,	4
Economics,	4	Elective,	4
Elective,	4	Elective,	4

Themes, 1.

Senior Year

See page 52 for list of Electives.

Greek or Elective,*	4	Greek, or Elective,*	4
Psychology,	4	Philosophy,	4
Elective,	4	Elective,	4
Elective,	4	Elective,	4

Graduating Theses.

* See page 44.

† One year of History and one year of Science are required for graduation.

The Course in Letters

This course, as the name indicates, is distinctly a culture course, the language and literature of the great modern nations—the English-speaking peoples, France and Germany—being the central feature. Latin, always a desirable element in general culture, may be taken throughout the course; increased time is given to History and Economics. A judicious choice of electives will afford special preparation for journalism, law, teaching, and other professions. This course leads to the degree of *Bachelor of Letters*.

Freshman Year

FIRST SEMESTER.	PERIODS.	SECOND SEMESTER.	PERIODS.
English,	4	English,	4
French or German,	4	French or German,	4
Mathematics,	4	Mathematics,	4
Biology* or History* or Latin	4	Biology,* or History,* or Latin,	4

Bible Literature, 1; Composition, 1; Elocution, 2.

Sophomore Year

English,	4	English,	4
French or German,	4	French or German,	4
Two of the following:		Two of the following:	
History,*	4	History,*	4
Latin,	4	Latin,	4
Mathematics,	4	Mathematics,	4
Physics,*	4	Physics,*	4

Bible Literature, 1; Composition, 1; Elocution, 2.

Junior Year

(See page 52 for list of Electives.)

English,	4	English,	4
French,	4	French,	4
German,	4	German,	4
Economics,	4	Economics,	4
Elective,	4	Elective,	4

Themes, 1.

Senior Year

(See page 52 for list of Electives.)

French,	4	French,	4
German,	4	German,	4
Psychology,	4	Philosophy,	4
Elective,	4	Elective,	4
Elective,	4	Elective,	4

Graduating Theses.

*Two years of History and one year of Science are required for graduation.

The Course in Science

While this course provides for the adequate study of Mathematics and at least one Modern Language, its characteristic feature is extended work in Physics, Chemistry, and Biology. Students pursuing this course must take *all that is offered in one of these sciences*, and *two years' work in each of the others*; and must take Course III in German. By a proper choice of electives this course may be made of especial value in preparation for the study of medicine, or for engaging in manufacturing or commercial pursuits. It leads to the degree of *Bachelor of Science*.

Freshman Year

FIRST SEMESTER. PERIODS.		SECOND SEMESTER. PERIODS.	
Biology,	4	Biology,	4
Chemistry,	4	Chemistry,	6=4
French or German,	4	French or German,	4
Mathematics,	4	Mathematics,	4

Bible Literature, 1; Composition, 1; Elocution, 2.

Sophomore Year

Chemistry,	8=4	Chemistry,	8=4
Mechanics,	4	Sanitary Science,	2
Geology,	2	Physics,	4
French or German,	4	French or German,	4
Mathematics,	4	English or Mathematics,	4

Bible Literature, 1; Composition, 1; Elocution, 2.

Junior Year

(See page 52 for list of Electives.)

Biology,	8=4	Biology,	8=4
Physics,	4	Physics,	4
French or German,	4	French or German,	4
Elective,*	4	Elective,*	4
Elective,	4	Elective,	4

Themes, 1.

Senior Year

(See page 52 for list of Electives.)

Biology, or Chemistry, or Physics, 8=4	Biology, or Chemistry, or Physics, 8=4
Psychology, 4	Philosophy, 4
Elective, 4	Elective, 4
Elective, 4	Elective, 4
Elective, 4	Elective, 4

Graduating Theses.

* Students choosing Chemistry as their major science must take Chemistry instead of this Elective.

The Course in Engineering

This course offers a training well adapted to the needs of civil, mechanical, and electrical engineers, as well as of the large class who are to be concerned with the material interests of the country, with manufacturing, with industrial pursuits, or with any of the many other occupations allied to engineering. It embraces liberal and technical instruction in the mathematical, physical, and graphical sciences, and their applications, in practical field engineering, in the arts of design and construction, and in the use of tools, materials, and machinery, and in processes. The course leads to the degree of *Bachelor of Science in Engineering*.

Freshman Year

FIRST SEMESTER.	PERIODS.	SECOND SEMESTER.	PERIODS.
Drawing,	6=2	Drawing,	6=2
Wood Working,	6=2	Forging,	6=2
Mathematics,	7	Mathematics,	7
Chemistry,	4	Chemistry,	4
English,	4	English,	4

Bible Literature, 1; Composition, 1.

Assigned work for summer vacation.

Sophomore Year

Descriptive Geometry, 5=3 Machine Practice, 6=2 Mathematics, 4 Mechanics, 4 Chemistry, 8=4 Elocution or English, 2 Geology, 2	Surveying, 2 Graphical Statics, 3=1 Machine Practice, 6=2 Mathematics, 4 Physics, 4 Elocution or English, 2 Sanitary Science, 2 Chemistry, 8=4
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Bible Literature, 1.

Assigned work for summer vacation.

Junior Year

(See page 52 for List of Electives.)

Mechanics of Materials,	4	Thermodynamics,	4
Field Practice and Drawing, . . .	3=1	Laboratory Practice and Drawing, 3=1	
Machine Practice,	6=2	Machine Practice,	6=2
Physics,	4	Physics,	4
Applied Electricity,	2	Applied Electricity,	2
Mathematics,	4	Elective,	4
Elective,	4	Elective,	4

Assigned work for summer vacation.

Senior Year

(See page 52 for list of Electives.)

Railway Engineering,	5	Hydraulics,	4
Lab. and Field Practice,	6=2	Structural Design,	10=4
Theory of Errors,	2	Power Plants,	2
Drawing,	4=2	Economics,	4
Economics,	4	Elective,	4
Elective,	4	Elective,	2
Elective,	2		

Graduating Theses.

Graduation and Degrees

The Degree of Bachelor

The degrees of Bachelor of Arts, of Letters, and of Science are conferred on the completion of the corresponding courses.

The Degree of Master

All candidates for the Master's Degree (A. M., M. L., and M. S.) must have taken the Bachelor's Degree at this College. They are required to pursue a course of study at Swarthmore, or elsewhere, under the direction of the Faculty, and to pass examination in the same. Graduates residing at the College may reasonably hope to complete the work in one year; non-residents, engaged in other work, must devote to it not less than two years. Courses of study will be assigned to candidates upon application to the Faculty stating the subject, or subjects, which they desire to pursue.

The examinations for the Degrees will be both oral and written, and will be conducted by a Committee of the Faculty, upon whose report the Faculty will decide upon the fitness of the candidate for the Degree. An extended thesis, bearing upon some part of the work assigned, will in all cases be required. The candidate should apply to the Registrar for printed statement of requirements.

The Degree of Civil Engineer

The Degree of C. E. will be conferred upon Bachelors of Science of the Engineering Department who shall have been engaged for not less than three years in successful professional practice in positions of responsibility, and who shall present acceptable theses upon subjects pertaining to some branch of Engineering. Application for this Degree must be made and the thesis presented at least *three months* before Commencement.

Officers of the Alumni Association

INCORPORATED 1882



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LINDA B. PALMER, '87, West Chester, Pa.
JOHN L. CARVER, '93, Media, Pa.

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EMMA GAWTHROP HAYES, '88, Swarthmore, Pa.

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SARAH BANCROFT, '97, Wilmington, Del.
HELEN B. SMITH, '95, Media, Pa.

Graduates

Class of 1873

SARAH H. (ACTON) HILLIARD, A.B., Salem, N. J.
 HELEN (MAGILL) WHITE, A.B. (Ph.D., Boston University, 1877), Berlin, Germany.
 ELIZABETH C. (MILLER) HOLCOMB, A.B., Pearl River, N. Y.
 ESTHER T. MOORE, A.B., Swarthmore, Pa.
 *MARIA C. (PIERCE) GREEN, A.B., 1877.
 LOWNDES TAYLOR, A.B., West Chester, Pa.

Class of 1874

ELLEN H. (EVANS) PRICE, A. M., 1884, Swarthmore, Pa.
 AMY W. (HALL) HICKMAN, A.B., West Chester, Pa.
 *ALFRED T. HAVILAND, B.S., 1874.
 MARY (HIBBARD) THATCHER, A.B., Wilmington, Del.
 HERMAN HOOPES, C.E., 1879, Philadelphia, Pa.
 FERRIS W. PRICE, A.M., 1887, Swarthmore, Pa.
 ELIZABETH S. (WOOLSTON) COLLINS, A.B., Swarthmore, Pa.

Class of 1875

JOHN B. BOOTH, A.B., Pittsburgh, Pa.
 HELEN (COMLY) WHITE, A.B., Lansdowne, Pa.
 *FRANKLIN H. CORLIES, B.S., 1898.
 *HERBERT G. DOW, A.B. (and Harvard, 1877), 1878.
 ELIZABETH (HANES) TAYLOR, A.B., Woodstown, N. J.
 EDITH R. (HOOPER) ROBERTS, A.B., Titusville, Pa.
 BARTON HOOPES, JR., B.S., Philadelphia, Pa.
 *OLIVER KEESE, JR., B.S., 1879.
 *J. REECE LEWIS, B.S., 1898.
 HOWARD W. LIPPINCOTT, A.B., Philadelphia, Pa.
 MARTHA (McILVAIN) EASTWICK, A.B., Philadelphia, Pa.
 JOHN K. RICHARDS, A.B. (and Harvard, 1877), Washington, D.C.
 WILLIAM H. RIDGWAY, C.E., 1879, Coatesville, Pa.

Class of 1876

FRANK L. BASSETT, B.S. (D.D.S., Phila. Dental College, 1878), Swarthmore, Pa.

* Deceased.

- ARTHUR W. BRADLEY, A.B., Cleveland, Ohio.
 FRANCES (LINTON) SHARPLESS, A.M., 1881 (M.D.,
 Woman's Medical College, Phila., 1886), West Chester, Pa.
 ELIZABETH L. (LONGSTRETH) BOYD, A.B., Haverford, Pa.
 JAMES T. MCCLURE, B.S., Philadelphia, Pa.
 EMMA (MCLLVAIN) COOPER, A.B., Camden, N. J.
 EDWIN MITCHELL, JR., A.B. (B.L. and B.S.R., Sorbonne,
 Paris, 1877), Paris, France.
 LUCY R. (PRICE) MCINTIRE, A.B., 1880, Philadelphia, Pa.
 *ISAAC G. SMEDLEY, B.S. (M.D., Hahnemann Medical
 College, 1879), 1899.
 HERBERT W. SMYTH, A.B. (and Harvard, 1878, Ph.D.,
 Göttingen, 1884), Athens, Greece.
 MARY WILLITS, A.M., 1881 (M.D., Woman's Medical Col-
 lege, Phila, 1881), Norristown, Pa.
 WILLIAM P. WORTH, B.S., Coatesville, Pa.

Class of 1877

- JOSEPH T. BUNTING, B.S. (LL.B., Univ. of Pa., 1880), . . . Philadelphia, Pa.
 NORMAN B. CORSON, A.B., Norristown, Pa.
 EUDORA MAGILL, A.B., New York, N. Y.
 JESSE R. NORTON, A.B. (and Harvard, 1879), Chicago, Ill.
 CARROLL R. WILLIAMS, A.M., 1882 (LL.B. Univ. of Pa.,
 1880), Philadelphia, Pa.
 M. FLORENCE YEATMAN, A.M., 1897, Norway, Pa.

Class of 1878

- CAROLINE E. (BURR) HALL, A.B., Trinidad, Col.
 MAYBELL P. (DAVIS) FOSTER, A.B., Providence, R. I.
 HOWARD DAWSON, A.M., 1882, Somerville, Mass.
 TACY A. (GLEIM) DUNNING, A.B., Los Angeles, Cal.
 WILLIAM J. HALL, B.S., Trinidad, Col.
 MARY P. (HALLOWELL) HOUGH, A.M. 1881 (M.D.,
 Woman's Medical College, Phila., 1881), Ambler, Pa.
 CHARLES A. HAWKINS, A.B., York, Pa.
 WILLIAM PENN HOLCOMB, M.L., 1882 (Ph.D., Johns Hop-
 kins Univ., 1886), Pearl River, N. Y.
 REBECCA S. (HUNT) WHITE, A.M., 1881 (M.D., Woman's
 Medical College, Phila., 1881), Lansdowne, Pa.
 ANNA E. (JACKSON) MONAGHAN, B.L., Swarthmore, Pa.
 LEWELLYN H. JOHNSON, B.S., Redlands, Cal.
 EDWARD MARTIN, A.M., 1882 (M.D., Univ. of Pa., 1883), Philadelphia, Pa.

FRANCIS J. PALMER, B.S.,	Brooklyn, N. Y.
ISRAEL ROBERTS, B.S.,	Camden, N. J.
*WILLIAM SEAMAN, C.E., 1884,	1892.
C. HARRY SHOEMAKER, B.S.,	Philadelphia, Pa.

Class of 1879

ISAAC R. COLES, C.E., 1880,	Glen Cove, N. Y.
WILLIAM P. FENDER, A.B.,	Williamsport, Pa.
WILLIAM LEA FERRIS, A.B.,	San Francisco, Cal.
JOSEPH FITCH, A.B.,	New York, N. Y.
RUTH ANNA FORSYTHE, A.B.,	Media, Pa.
ELIZABETH (FURNAS) BOGARDUS, B.L.,	Waynesville, O.
P. LESLEY HOPPER, A.B. (LL.B., Univ. of Maryland, 1881),	Havre de Grace, Md.
MARIE ANTOINETTE (KEMP) HOADLEY, A.M., 1892 . . .	Swarthmore College.
ELISHA E. LIPPINCOTT, B.S.,	Gallitzin, Pa.
*SAMUEL CRAIG MCCOMB, C.E., 1882,	1891.
CHARLES R. MILLER, B.L. (LL.B., Univ. of Pa., 1881),	Wilmington, Del.
JOSEPHINE (WHITE) BRECKENS, A.B.,	Cheyenne, Wyoming.
ABBY W. (WOODNUTT) MILLER, B.L.,	Wilmington, Del.

Class of 1880

ANNA E. CONSTABLE, A.B.,	Camden, N. J.
ARTHUR COLEMAN DAWSON, B.L., 1882,	Lake Forest, Ill.
FLORENCE (HALL) PHILIPS, A.B.,	Wilmington, Del.
MYRA T. HILLMAN, A.B.,	Washington, D. C.
EMILY L. (HOUGH) SAVIDGE, A.B. (and Univ. of Minn.,	
1881),	Boise, Idaho.
EDWARD H. KEISER, M.S., 1881 (Ph.D., Johns Hopkins	
Univ., 1884),	St. Louis, Mo.
GEORGINE KURTZ MUHLENBERG, A.B.,	Reading, Pa.
ALBERT R. LAWTON, A.M., 1885,	Chappaqua, N. Y.
ROBERT J. MARCHER, B.S.,	Syracuse, N. Y.
THOMAS L. MOORE, A.B.,	Richmond, Va.
ELLEN S. (PRESTON) GRIEST, A.B.,	Millersville, Pa.
JOHN TURTON, B.S.,	New York, N. Y.
FANNIE (WILLETS) LOWTHORP, A.B.,	Trenton, N. J.
HENRY S. WOOD, C.E., 1883,	New York, N. Y.

Class of 1881

MARTHA BUNTING, B.L. (Ph.D., Bryn Mawr College, 1895),	Philadelphia, Pa.
WILLIAM CANBY, JR., B.L.,	St. Paul, Minn.

* Deceased.

CHARLES B. DORON, B.L.,	Rochester, N. Y.
MARY J. ELLIOTT, B.L.,	Philadelphia, Pa.
EMMA KIRK, B.L.,	Ithan, Pa.
GERTRUDE B. MAGILL, A.B.,	Boise, Idaho.
EUGENE PAULIN, JR., A.B. (and Harvard, 1883),	San Francisco, Cal.
MARTHA E. (RHINOEHIL) OSBORN, A.B.,	Philadelphia, Pa.
EDWARD C. RUSHMORE, B.S. (M.D., Columbia, 1886),	Tuxedo Park, N. Y.
HENRY B. SEAMAN, C.E., 1884,	Mt. Vernon, N. Y.
CHARLES E. SHARPLESS, C.E., 1884,	Du Bois, Pa.
ALVIN T. SHOEMAKER, B.L.,	New York, N. Y.
*I. BYRON THOMAS, B.S.,	1891.
ERNEST F. TUCKER, A.B. (M.D., Harvard, 1884),	Portland, Ore.

Class of 1882

WILLIAM LLEWELLYN BANER, A.B. (M.D., Columbia, 1885), New York, N. Y.	
EDITH B. BLACKWELL, A.B. (M.D., Woman's Med. Col.,	
N. Y. Inf., 1891),	New York, N. Y.
CHARLOTTE E. (BREWSTER) JORDAN, M.L., 1886,	Lansdowne, Pa.
WILLIAM BUTLER, JR., A.B.,	West Chester, Pa.
C. HERBERT COCHRAN, A.B.,	Philadelphia, Pa.
BERTHA (COOPER) BREWER, B.L.,	Phoenixville, Pa.
P. FRANCES FOULKE, A.B.,	Philadelphia, Pa.
MARY E. (GALE) HIBBARD, A.M., 1891,	Laconia, N. H.
*SARAH S. (GREEN) PIERCE, A.B.,	1886.
MARGARET E. (HALLOWELL) POWELL, A.B.,	Lansdowne, Pa.
*ELIZABETH E. HART, B.L.,	1891.
ELIZABETH HASLAM, B.L.,	Philadelphia, Pa.
ELIZABETH M. OGDEN, B.L.,	West Chester, Pa.
CHARLES PALMER, A.M., 1885,	Chester, Pa.
*GEORGE C. PHILLIPS, B.S.,	1883.
HORACE L. ROSSITER, A.B.,	Cleveland, Ohio.
*CHARLES B. TURTON, B.S.,	1896.
GERRIT E. H. WEAVER, A.B. (and Harvard, 1884), A.M.,	
1886,	Philadelphia, Pa.
EMILY E. (WILSON) LAWTON, A.M., 1885,	Chappaqua, N.Y.
EDGAR M. ZAVITZ, A.B.,	Coldstream, Ontario, Can.

Class of 1883

CHARLES A. BUNTING, B.S.,	Swarthmore, Pa.
*JOHN L. COCHRAN, B.S.,	1885.
EDGAR CONROW, B.L.,	Moorestown, N. J.

*Deceased.

- LYDIA S. (GREEN) HAWKINS, A.B., Media, Pa.
 *FLORENCE N. HANES, A.B., 1897.
 ALICE W. JACKSON, A.B., Swarthmore, Pa.
 WILLIAM A. KISSAM, JR., B.S., Little Neck, N. Y.
 BERTHA (MATLACK) RUE, B.L., Camden, N. J.
 GUION MILLER, A.M., 1888 (LL.B., 1885, and LL.M.,
 1886, Columbian Univ.), Woodside, Md.
 S. DUFFIELD MITCHELL, A.B. (LL.B., Univ. of Pa.), Pittsburgh, Pa.
 EDWARD A. PENNOCK, A.B., Boston, Mass.
 GEORGE L. PENNOCK, B.S., Lansdowne, Pa.
 CHARLES S. PYLE, B.S., Rising Sun, Md.
 HELEN C. (PYLE) BUNTING, B.L., Swarthmore, Pa.
 FREDERICK A. SEAMAN, JR., B.S., Madison, N. J.
 ANNIE E. (TYLOR) MILLER, M.L., 1888, Woodside, Md.
 JAMES E. VERREE, B.L., Chicago, Ill.
 EMMA (WEBB) PRICE, A.B., Overbrook, Pa.

Class of 1884

- HORACE L. DILWORTH, B.S., Philadelphia, Pa.
 REBECCA M. (DOWNING) BULLOCK, B.L., Germantown, Pa.
 JOHN M. FURNAS, B.S., Waynesville, Ohio.
 SARAH L. (HALL) STIRLING, A.B., Philadelphia, Pa.
 HENRY J. HANCOCK, A.B. (LL.B., Univ. of Pa., 1886), Philadelphia, Pa.
 EDWIN HAVILAND, JR., B.S., 1885 (A.M., Cornell, 1899), Swarthmore College.
 MARY E. HUGHES, A.B., Hughesville, Pa.
 LAURA H. SATTERTHWAITE, A.B. (M.D., Woman's Medi-
 cal College, Phila., 1888), Trenton, N. J.
 FREDERICK J. TAYLOR, B.S., Tacoma, Wash.
 MARY WILLITS, A.B. (M.D., Woman's Medical College,
 N. Y. Inf., 1898), New York, N. Y.

Class of 1885

- MINNIE F. BAKER, A.B., Washington, D. C.
 ABIGAIL EVANS, A.B., Cinnaminson, N. J.
 FREDERIC P. MOORE, A.B., New York, N. Y.
 MARY D. (PRATT) RHODES, A.B., Bowdle, S. Dak.

Class of 1886

- EMMA S. (BONES) STONE, B.L., New Brighton, N. Y.
 *ARTHUR S. COCHRAN, B.S., 1899.
 GEORGE J. FREEDLEY, B.S., Richmond, Va.

HELEN G. JOHNSON, A.B.,	Williamsport, Pa.
ELLA (MERRICK) TOMLINSON, A.B.,	Brownsburg, Pa.
EDGAR M. SMEDLEY, B.S.,	Media, Pa.
ROWLAND J. SPENCER, B.L.,	Salem, Ore.
MARTHA M. (WATSON) SUTPHEN, A.M., 1891,	Holland, Mich.
C. PERCY WILLCOX, B.S. (Ph.B., Yale Univ., 1887; LL.B., Univ. of Pa., 1891),	Philadelphia, Pa.

Class of 1887

ALICE T. (BATTIN) LEWIS, A. B.,	Rumford Falls, Me.
HARRIET J. (COX) McDOWELL, B.S.,	New York, N. Y.
HORACE DARLINGTON, B.S.,	Darling, Pa.
HARRY B. GOODWIN, B.S.,	Bordentown, N. J.
ANNA M. (JENKINS) WEBSTER, A.B.,	Mankato, Minn.
T. ATKINSON JENKINS, A.B. (Ph.B., Univ. of Pa., 1888; Ph.D., Johns Hopkins Univ., 1894),	Nashville, Tenn.
FREDERICK K. LANE, B.S.,	Chicago, Ill.
LINDA B. PALMER, A.M., 1893,	West Chester, Pa.
HORACE ROBERTS, A.B.,	Fellowship, N. J.
ELIZABETH B. SMEDLEY, A.M., 1896,	Malvern, Pa.
ELIZABETH B. (SMITH) WILSON, A.B.,	Purcellville, Va.
WILLIAM G. UNDERWOOD, B.S.,	Philadelphia, Pa.

Class of 1888

ALICE M. ATKINSON, A.B. (and Cornell Univ., 1889; Ph.D., Univ. of Pa., 1895),	Swarthmore College.
T. JANNEY BROWN, B.S.,	Washington, D. C.
*FRANK CAWLEY, C.E., 1891,	1896
JESSIE L. COLSON, B.S.,	Woodstown, N. J.
SADIE M. (CONROW) HUTCHINSON, A.B.,	Plainfield, N. J.
WILLIAM L. DUDLEY, B.S.,	New York, N. Y.
ROBERT P. ERVIEN, B.S.,	Clayton, N. M.
E. LAWRENCE FELL, B.S.,	Philadelphia, Pa.
JOYEUSE L. (FULLERTON) SWEET, A.B. (and Cornell Univ., 1889),	Denver, Col.
EMMA (GAWTHROP) HAYES, B.S.,	Swarthmore, Pa.
ALICE (HALL) PAXSON, A.B.,	Swarthmore, Pa.
P. SHARPLES HALL, B.S. (M.D., Hahn. Med. Col., Phila., 1891),	Philadelphia, Pa.
WALTER HANCOCK, B.S.,	St. Paul, Minn.
JOHN RUSSELL HAYES, A.B. (and Harvard, 1889; LL.B., Univ. of Pa., 1892),	Swarthmore, Pa.

* Deceased.

MARTHA P. (JONES) MILLER, A.B.,	Harrisburg, Pa.
T. MONTGOMERY LIGHTFOOT, M.S. 1890 (Ph.D., Univ. of Pa., 1893),	Philadelphia, Pa.
HETTY C. (LIPPINCOTT) MILLER, A.B.,	Riverton, N. J.
ELLIS P. MARSHALL, JR., B.S.,	London Grove, Pa.
WILLIAM S. MARSHALL, B.S. (Ph.D., Leipsic, 1892), . .	Madison, Wis.
AARON C. PANCOAST, B.S.,	San Antonio, Texas.
JESSIE PYLE, A.B. (and Cornell Univ., 1889),	London Grove, Pa.
JOSEPH J. RHOADS, B.S.,	Jamesburg, N. J.
CATHERINE M. RIDER, B.L.,	Wilmington, Del.
WILLIAM H. SEAMAN, B.S.	Glen Cove, N. Y.
AMELIA SKILLIN, A.B.,	Burlington, N. J.
CARROLL H. SUDLER, A.B.,	Chicago, Ill.
CHARLOTTE M. WAY, B.S. (A.B., Leland Stanford, Jr., Univ.),	New York, N. Y.
ANNIE E. WILLITS, A.B.,	Syosset, N. Y.
ESTHER M. (WILLITS) FELL, B.L.,	Philadelphia, Pa.
FRANKLIN P. WILSON, A.B.,	Washington, D. C.

Class of 1889

JUSTIN K. ANDERSON, B.S.,	Breading, W. Va.
ALEXANDER G. CUMMINS, JR., A.B. (A.M., Columbia, 1898),	New York, N. Y.
HOWARD A. DILL, B.S. (and Mass. Inst. Tech., 1891), . .	Richmond, Ind.
HORACE B. FORMAN, JR., B.S.,	New York, N. Y.
ELLIS M. HARVEY, B.S. (M.D., Univ. of Pa., 1893), . .	Media, Pa.
CLARA HAYDOCK, B.L.,	Locust Valley, N. Y.
J. CARROLL HAYES, A.B. (and Harvard), 1890; (LL.B., Univ. of Pa., 1893),	West Chester, Pa.
JULIA HICKS, B.S.,	Brooklyn, N. Y.
MARY KIRK, A.B.,	Washington, D. C.
MARGARET J. (LAURIE) SEAMAN, A.B.,	Glen Cove, N. Y.
GEORGE A. MASTERS, B.S.,	Philadelphia, Pa.
ALICE S. PALMER, A.B.,	New York, N. Y.
LOUELLA (PASSMORE) HAYES, A.B.,	West Chester, Pa.
FREDERICK B. PYLE, B.S.,	Washington, D. C.
RALPH STONE, A.B. (LL.B., Univ. of Mich., 1892), . .	Detroit, Mich.
ELSIE D. (STONER) WILDES, B.L.,	Everett, Washington.
WILLIS W. VAIL, B.S.,	Plainfield, N. J.
JENNIE F. WADDINGTON, M.S., 1892,	Salem, N. J.

Class of 1890

ALVAN W. ATKINSON, A.B. (M.D., Hahnemann Medical College, Phila., 1893),	Trenton, N. J.
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SARA H. ATKINSON, A.B.,	Holicong, Pa.
GEORGE H. BARTRAM, B.S.,	Lenape, Pa.
MARTHA M. BIDDLE, B.L.,	Riverton, N. J.
EMMA J. BROOMELL, B.S. (and Univ. of Mich., 1893), . .	Baltimore, Md.
MORRIS L. CLOTHIER, B.S.,	Wynnewood, Pa.
BEULAH W. DARLINGTON, A.B.,	West Chester, Pa.
EDWARD DARLINGTON, B.S.,	Chadd's Ford Junc, Pa.
GEORGE ELLSLER, A.B.,	Orange, N. J.
CAROLINE R. GASTON, A.M., 1895,	Philadelphia, Pa.
JOHN C. GIFFORD, B.S., 1893 (D. Cæc., Univ. of Munich, 1899),	Princeton, N. J.
ABBY M. HALL, A.B. (and Cornell Univ., 1893), . . .	Swarthmore, Pa.
CLARA A. (HUGHES) MARSHALL, A. B.,	Madison, Wis.
SAMUEL R. LIPPINCOTT, B.S.,	Riverton, N. J.
WILLIAM D. LIPPINCOTT, B.S.,	Camden, N. J.
*WILLARD L. MARIS, M.S., 1892 (B. S., Univ. of Mich., 1891; M.D., Univ. of Pa., 1895),	1895.
ROBERT S. McCONNELL, B.S.,	Philadelphia, Pa.
FRANCES E. OTLEY, A.B.,	Austin, Texas.
*MARY D. PALMER, A.B.,	1892.
MARY E. PANCOAST, B.L.,	Washington, D. C.
JAMES W. PONDER, A.B.,	Wilmington, Del.
ELLIS B. RIDGWAY, B.S.,	Coatesville, Pa.
WALTER ROBERTS, A.B. (M.D., Univ. of Pa., 1893), . .	Philadelphia, Pa.
RICHARD C. SELLERS, B.S.,	Swarthmore, Pa.
FRANCES B. (SMITH) HERR, A.B.,	Moorestown, N. J.
MARY F. (SOPER) PANCOAST, B.S.,	San Antonio, Texas.
R. BARCLAY SPICER, A.B.,	Cincinnati, Ohio.
WILLIAM E. SWEET, A.B.,	Denver, Col.
ALICE W. TITUS, M.L., 1892,	Old Westbury, N. Y.
MARY H. WHITE, A.B.,	Lansdowne, Pa.

Class of 1891

EMILY ATKINSON, A.B.,	Moorestown, N. J.
COSMELIA J. (BROWN) HUGHES, B.L.,	Hughesville, Va.
LOUIS P. CLARK, B.S.,	Philadelphia, Pa.
HANNAH H. (CLOTHIER) HULL, B.L.,	Swarthmore, Pa.
EVA M. (DANIELS) CAPEN, B.S., 1892,	Boston, Mass.
ELIZA R. HAMPTON, A.B.	Waverly, N. Y.
ISAAC O. HARPER, B.S.,	Baltimore, Md.
ESTHER (HAVILAND) CORNELL, B.L.	Brooklyn, N. Y.
ELIZA G. (HOLMES) BENNETT, A.B.,	George School, Pa.

* Deceased.

JOHN W. HUTCHINSON, JR., B.S.,	New York, N. Y.
DORA LEWIS, B.L.,	Media, Pa.
*LUCY S. LIPPINCOTT, A.B.,	1891.
CHESTER P. MARTINDALE, B.L.,	West Chester, Pa.
HARRY L. McDONALD, B.S.,	Kansas City, Mo.
SARAH T. MOORE, B.L.,	Sandy Spring, Md.
A. MITCHELL PALMER, A.B.,	Stroudsburg, Pa.
ELLEN (PASSMORE) PYLE, B.L.,	Washington, D.C.
MARIANNA (SMITH) RAWSON, B.L.,	New York, N. Y.
WILLIAM C. SPROUL, B.S.,	Chester, Pa.
EDWARD B. TEMPLE, B.S.,	Lansdowne, Pa.
KATHARINE L. (TYLER) MEHAFFEY, B.S.,	Boston, Mass.
FRANCES M. WHITE, B.L.,	Baltimore, Md.
EDWARD C. WILSON, B.S.,	Washington, D. C.
M. LILIAN (YARNALL) DE COU, A.B.,	Trenton Junction, N. J.

Class of 1892

M. ELLEN (ATKINSON) JENKINS, B.L.,	Chicago, Ill.
M. ROSAMOND (BAKER) HAINES, A.B.,	Swarthmore, Pa.
BENJAMIN F. BATTIN, A.B.,	Jena, Germany.
JOSEPHINE BEISTLE, A.B.,	Swarthmore, Pa.
MARY E. BROOMELL, B.L.,	Baltimore, Md.
FREDERIC N. CARR, A.B.,	Charleston, W. Va.
HOWARD N. EAVENSON, C.E., 1897,	Scottdale, Pa.
HENRY H. GARRETT, B.S.,	Philadelphia, Pa.
HOWARD B. GREEN, B.S.,	Buffalo, N. Y.
CHARLES HART, B.S.,	Doylestown, Pa.
ANNIE HILLBORN, B.L.,	Swarthmore, Pa.
EDWARD A. JENKINS, B.S.,	Chicago, Ill.
CHARLES B. KETCHAM, A.B., 1893,	New York, N. Y.
PHEBE H. (KETCHAM) MCALLISTER, B.S.,	Colorado Springs, Col.
HENRY MCALLISTER, JR., B.L.,	Colorado Springs, Col.
BERNARD S. MCILVAIN, B.L.,	Darlington, Md.
JOHN S. MURRAY, B.S.,	Wallingford, Pa.
ELLEN PYLE, A.B.,	London Grove, Pa.
MARY E. STEBBINS, B.L.,	Baltimore, Md.
JOSEPH J. WALKER, B.S.,	New York, N. Y.
WILLIAM E. WALTER, B.S.,	Wallingford, Pa.
FLORENCE N. WOLVERTON, A.B.,	Vancouver, Wash.
MARY L. WOLVERTON, A.B.,	Vancouver, Wash.

Class of 1893

JANE ATKINSON, A.B.,	Holicong, Pa.
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* Deceased.

GEORGE H. BROOKE, B.S. (Ph.B., Univ. of Pa., 1895 ;	
LL.B., Univ. of Pa., 1898),	Philadelphia, Pa.
FRANCIS E. BROOMELL, B.S.,	Chicago, Ill.
JOHN L. CARVER, B.I.,	Media, Pa.
JOSEPH T. FREEMAN, C.E., 1899,	Rochester, N. Y.
DORA A. GILBERT, A.B.,	Chester, Pa.
CHARLES S. HALLOWELL, B.S.,	New York, N. Y.
*CLEMENT LODGE, B.S.,	1895.
LORENA B. MATLACK, A.B.,	West Chester, Pa.
CARLIE McCLUKE, A.B.,	Locust Valley, N. Y.
OMAR B. PANCOAST, B.S. (M.D., Johns Hopkins Univ.,	
1897),	Baltimore, Md.
JESSE H. REINHARDT, B.S.,	Uniontown, Pa.
ESTHER E. SPICER, B.L.,	Media, Pa.
JULIUS STAAB, A.B.,	New York, N. Y.
* JOHN B. STETSON, B.S. (M.D., Med. Chi. Col., Phila., 1896.),	Lansdale, Pa.
FRANCES B. (STEVENSON) PETTUS, A.B.,	Norfolk, Va.
GEORGE H. STROUT, A.B.,	New York, N. Y.
ESTHER H. SUTTON, B.L.,	Chappaqua, N. Y.
HENRY C. TURNER, B.S.,	New York, N. Y.
CARRIE B. WAY, B.L.,	Jenkintown, Pa.
LILA K. WILLETS, B.L.,	Roslyn, N. Y.
E. NEWLIN WILLIAMS, B.S. (M.D., Univ. of Pa., 1898).	Philadelphia, Pa.
S. ELLEN (WILLIAMS) BATTIN, B.S.,	Jena, Germany.
GENEVIEVE S. ZANE, A.B., 1894,	West Chester, Pa.

Class of 1894

MABEL ALEXANDER, B.L.,	Philadelphia, Pa.
ANNA S. ATKINSON, A.B.,	Buckingham, Pa.
LYDIA BIDDLE, B.L.,	Baltimore, Md.
EDWIN P. BOND, A.B.,	Philadelphia, Pa.
BERTHA L. BROOMELL, B.S.,	Wilmington, Del.
EMMA S. (CHAMBERS) WHITE, A.B.,	Atlantic City, N. J.
ELIZABETH CONROW, A.B.,	Paris, France.
HERMAN CONROW, C.E., 1897,	Orange, N. J.
ALTHA T. COONS, B.S.,	Washington, D. C.
HETTY L. COX, B.L.,	Baltimore, Md.
JOSEPH C. EMLEY, B.S.,	Philadelphia, Pa.
FREDERIC H. GAWTHROP, B.S.,	Baltimore, Md.
JOHN W. GREGG, B.L.,	Baltimore, Md.
GEORGE G. GRIEST, B.S.,	New York, N. Y.
MARY A. (HAYES) GAWTHROP, A.B.,	Baltimore, Md.
HELEN R. HILLBORN, A.B.,	Swarthmore, Pa.

* Deceased.

HELEN S. HUTCHINSON, B.S.,	Baltimore, Md.
MARY B. (JANVIER) PUGH, B.L.,	Lansdowne, Pa.
HARRIET M. (KENT) HILTON, A.B.,	Coudersport, Pa.
HELEN P. LAMB, B.L.,	Baltimore, Md.
M. ELIZABETH LAMB, B.L.,	Baltimore, Md.
OWEN MOON, JR., B.S.,	Trenton, N. J.
MARION D. PERKINS, A.B.,	Moorestown, N. J.
MARGARET D. PFAHLER, B.S.,	Philadelphia, Pa.
DAVID B. RUSHMORE (M.E., Cornell Univ., 1895), C.E.,	
1897,	Pittsfield, Mass.
CAROLINE P. (SARGENT) WALTER, A.B.,	Wallingford, Pa.
PHILIP SELLERS, C.E., 1897,	Swarthmore, Pa.
CORNELIA J. SHOEMAKER, B.L.,	New York, N. Y.
EDWARD A. STAAB, A.B. (and Harvard, 1896),	Philadelphia, Pa.
MARY W. TITUS, B.L.,	Old Westbury, N. Y.
HELEN (TRAIN) TANNEHILL, B.S., 1895,	McConnellsville, Ohio.
DANIEL UNDERHILL, JR., B.S.,	Jericho, N. Y.
MARY UNDERHILL, M.S., 1895,	Cambridge, Mass.
ALLEN K. WHITE, B.S.,	Atlantic City, N. J.
STUART WILDER, B.S.,	Chestoa, Tenn.
JOHN M. WILLIS, B.S.,	Philadelphia, Pa.
MARY E. YEO, B.S.,	Easton, Md.
*SUSANNA S. YEO, B.L.,	1895.
HARRY P. YOUNG, B.S.,	Morton, Pa.

Class of 1895

FRANK C. ANDREWS, B.S. (M.E., Cornell, 1897),	Philadelphia, Pa.
ELIZABETH M. BAILY, B.S.,	Norristown, Pa.
WILLIAM S. BARKER, B.S.,	Lansdowne, Pa.
HARRY E. BEAN, B.S.,	Philadelphia, Pa.
HILDEGARD BROOKS, B.S.,	Newburgh, N. Y.
FRANCES W. (CHEAIRS) MANNING, B.L.,	Trenton, N. J.
WALTER CLOTHIER, B.L.,	Wynnewood, Pa.
MAY GIFFORD, B.L.,	Princeton, N. J.
ANNA R. H. HARRISON, B.L.,	Xenia, Ohio.
MARY B. (HOLLINGSHEAD) HANCOCK, A.B.,	Philadelphia, Pa.
EMMA S. (HUTCHINSON) CONROW, B.L.,	Orange, N. J.
ROLAND G. KENT, A.M., 1898; B.L., 1896,	Berlin, Germany.
JOHN A. LAFORE, C.E., 1898,	Philadelphia, Pa.
C. IRVINE LEIPER, B.S., 1896,	Wallingford, Pa.
EGBERT P. LINCOLN, B.S.,	Washington, D. C.
BERTHA LIPPINCOTT, B.L.,	Riverton, N. J.
EDGAR LIPPINCOTT, B.S.,	Riverton, N. J.

*Deceased.

JOSEPH R. LIPPINCOTT, A.B.,	Moorestown, N. J.
ELIZABETH B. MILLER, A.B.,	Media, Pa.
CHARLES S. MOORE, B.L.,	Moorestown, N. J.
SAMUEL C. PALMER, A.B.,	Swarthmore, Pa.
LYDIA M. PARRY, A.B.,	Hainesport, N. J.
ALFRED E. PFAILLER, B.S.,	Philadelphia, Pa.
M. ELIZABETH POWNALL, B.L.,	Christiana, Pa.
*FRANK L. PRICE, A.B.,	1896.
ARTHUR H. SCOTT, B.S.,	Swarthmore, Pa.
JANE C. (SHAW) HEPBURN, B.L.,	Avondale, Pa.
HELEN B. SMITH, A.M., 1899,	Media, Pa.
G. EDMUND STRATTAN, B.S.,	Altoona, Pa.
WILLIAM H. WANZER, A.B.,	Hurstville, N. Y.
EMMA A. (WASLEY) SNYDER, B.L.,	Philadelphia, Pa.
HOWARD WHITE, JR., B.S. (M.S., Univ. of Mich., 1896),	Earlington, Ky.
ALICE P. WILLITS, A.B.,	Jericho, N. Y.
ALBERT T. YARNALL, B.L.,	George School, Pa.

Class of 1896

MARY S. BARTRAM, A.B.,	London Grove, Pa.
WILLIAM I. BATTIN, A.B.,	Sheboygan, Wis.
LEOPOLD W. BIERWIRTH, B.S.,	Mountain View, N. J.
MELLIE E. BISHOP, B.L.,	Bloomington, Ill.
ALBERT L. BUFFINGTON, A. B.,	Rising Sun, Md.
CAROLIEN H. CHAMBERS, B.L.,	Unionville, Pa.
CHARLES CHANDLER, B.S.,	Bushnell, Ill.
WILLIAM B. CHAPIN, B.S.,	Brooklyn, N. Y.
ISAAC H. CLOTHIER, JR., A.B.,	Wynnewood, Pa.
FRANCES DARLINGTON, A.B.,	Glen Mills, Pa.
AIDA T. EVANS, B.L.,	Malvern, Pa.
GEORGE B. FERRIER, JR., B.S.,	Moorestown, N. J.
E. HARPER FIRTH, C.E., 1899,	East Williston, N. Y.
HARRIE H. FOUSE, B.S., 1898,	Philadelphia, Pa.
SYLVESTER S. GARRETT, B.S.,	Swarthmore, Pa.
T. RUSSELL GLEIM, B.S.,	Lansdowne, Pa.
ELLEN GUNTON, A.B.,	New York, N. Y.
HALLIE H. (HAINES) HODGE, B L.,	Philadelphia, Pa.
VIOLETTE T. HAINES, A.B.,	Rising Sun, Md.
CHARLES G. HODGE, B.L.,	Philadelphia, Pa.
IOLENE M. (HOLLENSHEAD) SMITH, A.B.,	Kenwood, Cal.
HOWARD C. JOHNSON, B.L.,	Philadelphia, Pa.
CHARLES KAIGHN, B.S.,	Mobeetie, Texas.
PHILIP S. KNAUER, A.B.,	Newport, R. I.

*Deceased.

MARY C. McALLISTER, A.B.,	Colorado Springs, Col.
MARY S. McDOWELL, A.B.,	New York, N. Y.
ARABELLA E. MOORE, B.L.,	Philadelphia, Pa.
WILLIAM J. MORRISON, B.S.,	Trenton, N. J.
PERCIVAL PARRISH, B.L.,	Newport, R. I.
N. WILMER PLUMMER, B.S.,	Mount Pleasant, Md.
CHARLES A. SCHOOLEY, B.S.,	St. Thomas, Canada.
MARY T. SHOEMAKER, B.L.,	Riverton, N. J.
J. CHAUNCEY SHORTLIDGE, A.B. (and Harvard, 1898),	Cambridge, Mass.
LAURETTA T. SMEDLEY, A.B.,	Willistown Inn, Pa.
A. ELLA SPICER, A.B.,	Baltimore, Md.
ALBERT H. TAYLOR, B.S.,	Philadelphia, Pa.
FRANKLIN D. WALTON, B.L.,	London Grove, Pa.
JOHN E. WELLS, M.L., 1899,	Columbia University.
HANSON Z. WILSON, C.E., 1899,	Port Jervis, N. Y.
KETURAH E. YEO, B.S.,	Easton, Md.

Class of 1897

SARAH BANCROFT, B.S.,	Wilmington, Del.
FREDERIC D. BARBER, B.S.,	Normal, Ill.
MARY E. BARTLESON, B.L.,	Chester, Pa.
REUBEN G. BENNETT, B.S.,	George School, Pa.
FRANK G. BLAIR, B.S.,	Charleston, Ill.
GRACE A. BROSIUS, B.L.,	Lancaster, Pa.
THOMAS CAHALL, B.L.,	University of Penna.
DAISY R. CORSON, B.S.,	Norristown, Pa.
JARED W. DARLINGTON, B.S.,	Darling, Pa.
WALTER C. DE GARMO, B.S.,	Cornell University.
GERRY B. DUDLEY, A.B.,	Ashmore, Ill.
IOLA K. EASTBURN, B.L.,	Philadelphia, Pa.
JESSIE D. ELLIS, B.L.,	Philadelphia, Pa.
GEORGE GLEIM, JR., B.S.,	Pottsville, Pa.
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CLARENCE B. HOADLEY, B.S.,	Swarthmore, Pa.
EDITH H. JOHN, B.L.,	Media, Pa.
FREDERIC S. LARISON, A.B.,	El Paso, Ill.
NELLIE LODGE, B.S.,	Philadelphia, Pa.
ROBERT E. MANLEY, B.S.,	Stevens Inst. of Tech.
WALKER MATTESON, A.B.,	Roslyn, N. Y.
LAURA C. MILLER, A.B.,	New York, N. Y.
HERBERT L. NOXON, B.S.,	Ontario, California.
ELLWOOD C. PARRY, B.L.,	Wyncote, Pa.
ROBERT PYLE, A.B.,	West Grove, Pa.
SAMUEL RIDDLE, B.S.,	Media, Pa.

MIRIAM SENER, B.L.,	Lancaster, Pa.
BERTHA J. SMITH, B.L.,	Lincoln, Va.
MARSHALL P. SULLIVAN, B.L.,	Moorestown, N. J.
HENRIETTA F. WANZER, A.B.,	Chappaqua, N. Y.
CHANNING WAY, A.B.,	West Chester, Pa.
HOWARD J. WEISTER, B.S.,	Wilmington, Del.
LYDIA P. WILLIAMS, B.L.,	Philadelphia, Pa.
JOSEPH A. WILLIS, B.S.,	Fowling Creek, Md.

*
Class of 1898

CHARLES T. BROWN, A.B. (and Harvard 1899),	West Chester, Pa.
HIRAM D. CAMPBELL, B.S.,	Ironton, Ohio.
EVA E. FOSTER, B.L.,	Lancaster, Pa.
A. VIRGINIA GILLESPIE, B.L.,	Allegheny, Pa.
MABEL A. HARRIS, B.L.,	Etna, N. H.
JONATHAN Y. HIGGINSON, B.S.,	Pittsburgh, Pa.
MARY S. HOWELL, A.B.,	Mt. Ephraim, N. J.
RACHEL KNIGHT, B.L.,	Millville, Pa.
EDITH LAMB, B.L.,	Baltimore, Md.
CAROLINE A. LUKENS, B.L.,	Swarthmore College.
WILLIAM B. MILLER, B.S. (M.E., Cornell, 1899),	Pittsburgh, Pa.
ALBERT C. MYERS, B.L.,	Philadelphia, Pa.
EDNA M. NICHOLL, B.L.,	Scotch Plains, N. J.
ARTHUR L. PATTON, B.S.,	Port Collins, Col.
S. EDNA POWNALL, B.L.,	Kennett Square, Pa.
EDNA H. RICHARDS, B.L.,	Salem, O.
ARTHUR C. SMEDLEY, B.S.,	New York, N. Y.
ELY J. SMITH, B.L.,	Doylestown, Pa.
LEVI S. TAYLOR, B.S.,	Wilmington, Del.
FREDERIC L. THOMAS, B.S.,	Ashton, Md.
ABNER P. WAY, B.S.,	Hahnemann Med. Col.
ALICE WITBECK, B.L.,	Belvidere, Ill.

Class of 1899

MARY E. ARMSTRONG, B.L.,	Philadelphia, Pa.
MARY G. BALL, B.L.,	Merchantville, N. J.
RICHARD J. BOND, B.S.,	Upper Darby, Pa.
LEVIS M. BOOTH, B.S.,	New York, N. Y.
ANNA BRADBURY, B.L.,	Richmond, Ind.
JOHN P. BROOMELL, A.B.,	Baltimore, Md.
EMILY W. CARTER, B.L.,	Buffalo, N. Y.
CALVIN F. CROWELL, B.S.,	Moorestown, N. J.
ANNA B. EISENHOWER, A.B.,	Cambridge, Mass.

EDITH FLITCRAFT, A.B.,	Cambridge, England.
HELEN M. FOGG, B.L.,	Philadelphia, Pa.
MABEL C. GILLESPIE, B.L.,	Allegheny, Pa.
GILBERT L. HALL, A.B.,	Brooklyn, N. Y.
A. DAVIS JACKSON, B.S.,	Locust Valley, N. Y.
M. KATHARINE LACKEY, B.L.,	Atlantic City, N. J.
MARY G. LEIPER, B.L.,	Wallingford, Pa.
JANE E. LINVILL, B.L.,	White Plains, N. Y.
ALICE LIPPINCOTT, B.L.,	Riverton, N. J.
WALTER H. LIPPINCOTT, B.S.,	Riverton, N. J.
ANNIE LODGE, B.S.,	Philadelphia, Pa.
HELEN S. MOORE, B.L.,	Atlantic City, N. J.
MARSHALL PANCOAST, B.L.,	Honolulu, Hawaii.
ANNIE B. PARRISH, B.L.,	Woodbury, N. J.
MARY E. SEAMAN, A.B.,	Cambridge, England.
BENJAMIN A. THOMAS, A.B.,	University of Pa.
EMILY R. UNDERHILL, B.L.,	Glen Head, N. Y.
J. SERRILL VERLENDEN, B.S.,	Darby, Pa.
ELIZABETH E. WILLITS, B.L.,	Glen Cove, N. Y.

Honorary Degrees Conferred

1888

WILLIAM HYDE APPLETON, Ph.D. (A.B., Harvard, 1864; A.M., LL.B., Harvard, 1869; Acting President and President of Swarthmore College, 1889-1891), Professor of Greek and of Early English.

SUSAN J. CUNNINGHAM, Sc.D., Professor of Mathematics and Astronomy.

1889

ARTHUR BEARDSLEY, Ph.D. (C.E., Rensselaer Polytechnic Institute, 1867; Professor of Engineering and Director of Mechanic Arts, 1872-1898), Emeritus Professor of Engineering and Librarian of Friends' Historical Library.

ISAAC SHARPLESS, LL.D. (B.S., Harvard, 1873; Sc.D., Univ. of Pa., 1883), President of Haverford College.

1890

OLIVIA RODHAM, A.B. (Assistant Librarian and Instructor in Botany, 1881-1888).

1897

ELIZABETH POWELL BOND, A.M., Dean.

Committee on Trusts, Endowments, and Scholarships

EDMUND WEBSTER,
1156 South Broad Street, Philadelphia, Pa.

EDWARD H. OGDEN,
314 Vine Street, Philadelphia, Pa.

EMMOR ROBERTS,
Fellowship, N. J.

SUSAN W. LIPPINCOTT,
Cinnaminson, N. J.

JOHN T. WILLETS,
303 Pearl Street, New York, N. Y.

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Sharon Hill, Pa.

